Nursing World

SEPTEMBER 1958

'Here We Are One Big Family'
says Jeanette Averill, R.N.

Nursing Assignment:
THE UNITED NATIONS

THE ENCOURAGEMENT OF PROGRESS

The American Cancer Society's annual Spring Crusade is the climax of its year-round attack on cancer through research, professional and lay education, and service to the stricken. A study of the cancer scoreboard indicates that steady progress is being made. More and more lives are being saved. Progress encourages more progress.

Earlier diagnosis, new methods of treatment and a greater public awareness have contributed to this progress. It is often said that the life of the cancer patient is in the hands of the first physician he consults. The Society, therefore, conducts a broad professional education program, making available to doctors, through literature, films, exhibits, and other materials, information on the latest advances in detection, diagnosis and treatment.

As the Society aids the doctor, so does its large corps of volunteers aid the cancer patient with dressings, transportation, home care, medication and a host of other vitally needed services.

For the past two years, the theme of the Society's annual Crusade has been "Fight Cancer with a Checkup and a Check." That Americans everywhere are learning the value of the annual health checkup in the fight against cancer, is evidenced by the fact that doctors report they are now seeing more cancer in its earliest stages than ever before.

That American men and women have a personal stake in the program of the American Cancer Society is demonstrated by the public's generous support of the Crusade. This year the goal is $30,000,000 and we are confident that our people will meet the challenge . . . will "fight cancer with a checkup and a check" in the encouragement of further progress.

Lowell T. Coggeshall, M.D., *President*
American Cancer Society

IN THIS ISSUE

COVER: Catherine Tseng, R.N., one of the nurses at the Health Service Department of the United Nations, is giving an inoculation to Miss Paule Jekel who is due to leave soon for a mission abroad. Behind them is a chart which lists the preventive vaccinations required before traveling to any country of the world. (See page 8 for details concerning the Health Service of the U.N.) *United Nations Photo.*

Leora W. Wells

Cystic fibrosis is, at present, incurable; half of its victims die before reaching five years of age. On learning that their child has CF, the stunned and frightened parents often turn to the nurse for comfort and support. In "Cystic Fibrosis" (page 7), Leora Wood Wells explains how the nurse should act in such a situation. Mrs. Wells, a volunteer officer of the Washington, D.C., Chapter of the National Cystic Fibrosis Research Foundation frequently speaks about the disease before community groups. She holds a B.A. degree from the University of Illinois and did graduate work at Stanford University.

Samuel M. Feinberg, M.D., in the second in a series of articles on allergy, discusses "Hay Fever and Asthma" (page 10). A past president of the American Association for the Study of Allergy, Dr. Feinberg is also the author of several books and articles on the subject of allergy.

In "Nursing Assignment: The United Nations" (page 12), Shirley Hope Alperin, R.N., explains how the nurses of the U.N. Health Service help protect the health of U.N. delegates, staff members, and visitors.

Mitzi Jackson

Because much skin grafting is performed on burn patients, Mitzi L. Jackson, S.N., concentrates on these patients in "Nursing Care of Skin Grafts" (page 16). Miss Jackson reviews the anatomy of the skin and discusses the basic underlying nursing principles that the nurse must follow before and after the patient undergoes skin grafting. It is the responsibility of the nurse, she points out, to encourage the patient to get his problems off his mind by sharing them with her. Miss Jackson wrote this article while a student at the University of Texas School of Nursing in Galveston, Tex.

David R. Limbach

David R. Limbach, M.D., discusses, in "The Transaver" (page 22), the simple patient transport apparatus he has invented, and which he claims can eliminate 80 per cent of patient handling. Easily stored, 20 Transavers nest together in an area three feet square. Dr. Limbach, chief radiologist at Hurley Hospital, Flint, Mich., since 1947, received his M.D. from Western Reserve University in Cleveland, Ohio. He spent his residency at the University of Pennsylvania and the University of Cincinnati. Dr. Limbach served in the Army Medical Corps for two years and spent one year at Georgia Baptist Hospital.

During the 1958 Workshop on the Dynamics of Teaching, held at the University of Nebraska, Elizabeth Page Bowen, R.N., delivered a report on "Teaching-Learning-Evaluation: One Gestalt," which is reproduced on page 24 for NURSING WORLD's readers. Before becoming director of a research project concerned with practical nurse preparation for the care of the mentally ill, Miss Bowen was nursing education consultant for the World Health Organization.

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VIRGINIA A. TURNER, R.N.

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Circulation Manager
KATHRYN A. WILEY

Advertising and Production Manager
ARNOLD KRUPIN
480 Lexington Avenue
New York 17, N.Y.
YUkon 6-5120

Advertising Representatives
Midwestern States
ARTHUR J. KELLY & ASSOC.
1400 W. Devon Avenue
Chicago 26, Ill.
Rogers Park 4-1700

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NURSING WORLD

REPORTS

Healthier World

Dr. M. G. Candau, director-general of the World Health Organization, recently declared that we live in a healthier world in 1958 than we did in 1948. Dr. Candau made the statement on the occasion of the W.H.O.'s tenth anniversary. Since the specialized agency of the United Nations was founded, it has initiated or supported 800 health projects in over 100 countries and territories.

Indicating a few examples of the progress made since 1948, Dr. Candau stated that malaria is retreating everywhere; a considerable number of nations have reported a decline in the general mortality rate and a striking fall in infant mortality; and good results are being obtained by using antibiotics in mass campaigns against trachoma and infectious conjunctivitis.

According to Dr. Candau, the speed of health progress has been much greater than expected, due in part to the great advances made in science and medicine during World War II, as well as the knowledge gained since the war's end, which have been made available to all countries. These advances include the weapons chemotherapy now wields against typhoid, leprosy, and several other diseases; the benefits derived from the study of hormones and vitamins; the advances made in mother-and-child care; and the discovery of DDT and other insecticides.

However, the most important factor in the improving health of the world, Dr. Candau claims, has been the development of "health consciouness" on national and international levels.

But what of the future? "I am convinced," Dr. Candau declared, "that, if the great advances gained in science and technology are put at the service of all the people of the world, our children and their children will live in an age from which most of the diseases our grandparents and parents took for granted will be banished."

Sealantic Fund Grants

A special gift to the Sealantic Fund by John D. Rockefeller Jr. has enabled the Fund to initiate a broad program of aid to the fields of nursing education and nursing services, involving grants totaling $1,473,800.

Five general areas are covered by the grants: an intensified program to encourage recruits into the nursing field; development of two-year courses in basic nursing education in junior and community colleges throughout the country; pilot programs in collegiate schools of nursing designed to prepare more nurses for teaching roles; grants for baccalaureate nursing scholarships to 32 colleges and universities; and research into the economic utilization of nursing and related personnel in the operation of hospitals.

One of the Fund's grants—$411,000 to the National League for Nursing—will enable the N.L.N. to carry out an expanded four-year program aimed at encouraging more young men and women to enter the nursing profession.

Hospital TV

Closed-circuit television is now aiding nurses in the pediatric department of St. Joseph Mercy Hospital, Mason City, Iowa, to provide better patient supervision and a higher standard of nursing care.

Pictures picked up by the 20 TV cameras in the 17 rooms in the department are viewed on a monitor screen at the central control unit. At this unit an automatic timer switches the monitor picture from room to room in a prearranged sequence every few seconds. Viewing time, however, can be adjusted over a wide range or the timer disengaged so the station nurse can take over control. Ceiling-mounted speakers and microphones make possible two-way conversations.

According to Sister Mary Francelyn, pediatrics supervisor, the TV system has prevented serious accidents to young patients climbing out of their cribs, and it is valuable in caring for the very ill who would be disturbed by frequent supervisory visits of the nurse to their rooms.

Flight Nurses Needed

The 635th United States Air Force Reserve Hospital, New York City, is looking for local nurses interested in training for their roles in a national emergency.

The hospital was recently organized by the Air Force to train and partially maintain a smooth-functioning staff designed to be prepared for immediate operation in case of such an emergency. During the instruction periods, special emphasis is given to phases of medicine concerned with space and flight problems.

Nurses may serve at the hospital on a reserve basis, while employed by civilian hospitals.

The hospital personnel train as a unit for 46 inactive duty training as-

The San Francisco flower industry in conjunction with the Woman's Auxiliary of the AMA recently awarded scholarships to six students in San Francisco hospitals.

semblies—usually two Saturdays a month—plus 15 days of active duty each summer. Nurses receive one day's pay, determined by the individual's grade and length of service, for each training assembly attended. During the annual active duty training period, they will receive full pay and allowances.

Nurses associated with the hospital can receive officers' commissions in the United States Air Force, officer's club privileges, and allowances for Flight Nurse uniforms.

Further information may be obtained from Major Emig, New York Air Reserve Center, 346 Broadway, New York City.

Michigan P.N.A. Change

The Michigan Practical Nurse Association now has its headquarters at 717 S. Capitol Ave., Lansing, Mich. President of the association is Mrs. Mary Aument of Detroit, Mich.

Scholarships Awarded

Six San Francisco, Calif., student nurses were awarded Nurses Training Scholarships by the San Francisco flower industry, in conjunction with the woman's auxiliary of the American Medical Association, during the A.M.A. convention held recently in San Francisco.

Recipients of the scholarships were Patricia Leigh and Patricia Wright, St. Francis Hospital; Gwirene Bennett and Sharlene Spaans, Stanford Hospital; and Mary Smith and Tessie Requiro, Mt. Zion Hospital.

Victor Stein, scholarship fund trustee and past president of Florists' Telegraph Delivery, presented the awards following introductory remarks by Dr. Gunnar Gunderson, A.M.A. president.

A total of over 5,000 Nurses Training Scholarships have been awarded by 96 local units of the F.T.D. association.

Emergency Card

The Florida Heart Association has made available to physicians "emergency" identification cards for the protection of patients on long-term anticoagulant treatment.

The wallet-sized card points out that the bearer is "being treated with anticoagulants which slow down clotting of the blood." The card advises that in case of bleeding, injury, or illness, a doctor should be called. The name and telephone number of the patient's physician are listed on the card, and there is also a space to note the type of anticoagulant prescribed and the patient's blood type.

Sample cards may be obtained from your local Heart Association or from the Florida Heart Association, 2427 Central Ave., St. Petersburg, Fla.

New Red Cross Films

Four new 16 mm. sound films are included in the recently published American National Red Cross motion picture catalogue of 28 films available at local chapters.

"Boats, Motors, and People" and "First Aid" (Parts I and II) are produced in both black and white or color. "Disaster and You" is available in black and white only, and "From the Heart of Town" is produced only in color.

All of the films are available for sale and loan. Further information may be obtained by contacting your local Red Cross chapter.

Nurses at St. Joseph Mercy Hospital, Mason City, Iowa, have closed-circuit television to aid in the supervision of the 17-room, 42-bed pediatric department.

A.N.A. Staff Changes

The American Nurses' Association recently announced the appointment of Virginia L. Bauknecht as associate executive secretary in charge of the Public Relations Unit. Mary Lou Rankin, editorial assistant in the unit, has been promoted to succeed Miss Bauknecht as assistant executive secretary.

Miss Bauknecht, with the A.N.A. three and one-half years, is a graduate of Ohio Wesleyan University, where she received a B.A. degree; she also holds an M.S. in Journalism from Northwestern University. Miss Bauknecht succeeds Gretchen Gerds, who has left to make her home in Arizona.

Miss Rankin received a B.A. degree from Friends University, Wichita, Kan., and a bachelor of journalism from the University of Missouri.

N.S.N.A. Appoints New Head

Frances Tompkins, formerly part-time co-ordinator and assistant to the convention manager of the National Student Nurses Association, has been named full-time executive secretary of the association. Her appointment is a result of the N.S.N.A.'s new self-supporting status and the expansion of the headquarters staff.

A graduate of State Teacher's College, Lowell, Mass., Miss Tompkins had been assistant to the director of nursing education of the National League for Nursing.

Miss Student Nurse

Barbara Needham, a junior in the School of Nursing of the University of Tennessee Memorial Hospital in Knoxville, was recently named Miss Student Nurse of Tennessee 1958. Dr. Robert M. Foote of Nashville presented to Miss Needham a trophy honoring her selection.

One of the requirements for all contestants was an essay on the topic "What Nursing Means to Me." In her essay, published in the *Bulletin* of the Tennessee Nurses' Association, Miss Needham says that nursing is the feeling of accomplishment when the patient smiles as he leaves, nursing is a science, nursing is teaching. Nursing also means defeat when you work against overwhelming odds for hours in an emergency case only to lose the fight.

Miss Needham states, among other things, that nursing means "the under-

(*continued on page* 33)

Breathing is frequently difficult for the child with cystic fibrosis. He is taught how to use the inhalation machine.

Cystic Fibrosis

One out of every 600 children born in the United States is afflicted with cystic fibrosis. The nurse plays a significant part in aiding both the cystic fibrosis patient and his family.

by **LEORA WOOD WELLS**
Vice President for Public Relations, Washington, D.C., Chapter of the National Cystic Fibrosis Research Foundation

ONLY a few years ago cystic fibrosis was a term unfamiliar to the great majority of nurses. Those who had heard of it had either seen it mentioned briefly in a pediatric textbook or had encountered it through the accident of working in one of the few medical centers in the country where CF research was in progress. Now, however, with more widespread attention focused on this disease, nurses are becoming aware that cystic fibrosis is a serious medical problem, ranking high among the killers of children in this country. With this knowledge comes a new responsibility for nurses—to be prepared for the special demands which may be placed on them by CF cases.

In order to meet these special demands, nurses must understand the nature and symptoms of cystic fibrosis. CF is an hereditary, generalized disorder which affects many glands of the body and produces a wide range of symptoms. Chief among these are severe respiratory and digestive difficulties. Formerly considered a rare disease, CF is now believed to affect one child in every 600 born in the United States. There is no cure, and 50 per cent of these children die before the age of five years. For the remainder the outlook is poor, although a small group of patients have now reached their teens and early twenties, and constant research is opening up the hope that eventually it will be possible to maintain CF patients into full adulthood. Researchers hopefully cite the fact that the average age at death, which less than five years ago was under two years, has now risen to age four.

The symptoms of cystic fibrosis usually appear before the age of two years, often shortly after birth. The mother is apt to complain of a baby who apparently has colic and eats tremendous amounts yet is never satisfied with his food. His abdomen may be distended and his stools frequent and foul. Often at this stage there is a period of experimentation with various diets and formula changes on the theory that the child has allergies or celiac disease.

The nurse who works in the office of a pediatrician may become quite accustomed to seeing a young mother, blear-eyed from lack of rest, patting her wailing infant helplessly on the back as she awaits the doctor's suggestion about what dietary approach to try next. The nurse must tread the fine line between sympathy and firm cheerfulness as she hears the mother's tale of woe; otherwise the exhausted young woman is apt to burst into tears

and add her laments to those of her baby.

"I'm just so tired!" she will sob. "He's never quiet. He never sleeps more than two hours at a time, and he's screaming for food all the time. Then he starts that awful hollow coughing. Why can't the doctor do something? I can't stand to see the baby so miserable all the time—and I can't take much more myself!"

The competent nurse will, of course, reassure the mother that the doctor will make every effort to overcome the child's digestive difficulties, but at the same time she will remember to pass on to the doctor every detail of the symptoms the mother mentions. It is not unusual for the mother, in talking with the pediatrician, to be so preoccupied with one set of symptoms that she neglects to mention others which are equally significant. The child's cough may seem unimportant compared with the unceasing and unpleasant digestive problems. Yet the combination of these symptoms, reported by an alert nurse, can provide the clue that will set the doctor thinking about the possibility of CF. He then questions the mother in greater detail. Does the cough have a particularly empty, unproductive sound? When the baby has a cold, are his nasal secretions thick and sticky? Does his sweat seem unusually salty?

If the mother answers these questions in the affirmative, the doctor will arrange for any one of several diagnostic tests to be made. First he may want to use the fingerprint test developed only a year or two ago, which measures the salt content of the child's sweat. CF children have three to five times the normal amount of salt in their sweat. This test is a simple office procedure involving only the impression of a child's hand or foot in a special chemical compound. If the child has CF, the print will be yellowish-white against the dark red agar; if he does not have CF, no print will appear. A positive reaction on this test is an indication that further tests should be made, since the fingerprint test is considered a screening test rather than a complete diagnostic tool.

The young mother almost certainly will ask what the test means and for what disease the doctor is testing. Probably the doctor will tell her gently, "There's something called cystic fibrosis, which sometimes shows these particular symptoms. We'll do a little more checking into it."

The mother may be too frightened to press him for further information. Cystic fibrosis! Something she has never heard of! She may walk out of the doctor's office in a state of apparent composure, then suddenly go all to pieces in the waiting room. Her delayed questions are apt to pour out into the startled ears of the nurse: "What *is* cystic fibrosis? Is it serious? Will he get over it? How do you cure it?"

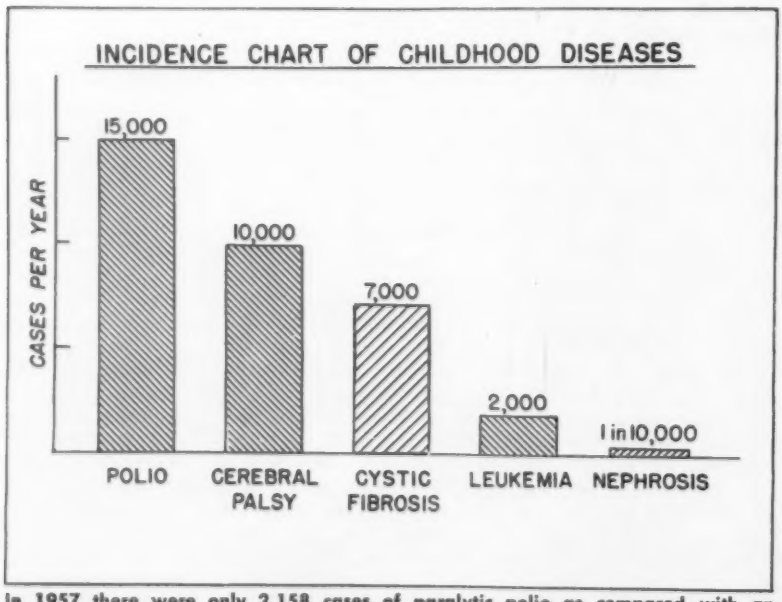
Need for Tact

This is a time when the nurse needs all the tact at her command. She must realize that the mother needs comfort and reassurance, yet she must also realize that it is unfair to mislead her by a light assurance that everything will soon be fine. She must be careful that her face does not betray the sense of shock and tragedy she may feel at hearing what may well be the death sentence of the child. She must recognize the mother's need for accurate information, yet she must understand that information with such serious implications is best not given all in one dose.

There is no simple description of what to look for, as there is in the case of measles or an ear infection. Cystic fibrosis is a life-long illness with the ever-present shadow of death near by. Perhaps even in the sad fact of the incidence of CF the nurse will find her most appropriate answer. "I know a lot of people haven't heard of it," she may say to the worried mother, "but you're really not alone. There are 7,000 new cases of it every year. The doctor probably told you he will need to do further tests before he is sure about it. He can explain more about it then."

If the mother persists with her frightened questions about the prognosis for the CF child, the nurse must try, without seeming evasive, to avoid giving information for which the doctor may feel the mother is not sufficiently prepared. Sometimes it is possible to parry the questions or add a qualification that will soften the harsh facts. If the mother insists on knowing whether there is a cure, the nurse may be forced to admit that there is not; but she can add with perfect honesty, "Research is progressing so fast that they have real hopes of finding one now, and in the meantime a great deal is being learned about how to care for CF patients and keep their symptoms under control." As she guides the mother gently out the door she may add, "Try not to worry about this, Mrs. S. The doctor will make sure you understand the problem fully if the other tests confirm the diagnosis. And he will work with you all the way until the baby's symptoms are under good control."

The nurse may, on the other hand, be faced with the reaction of a mother who already knows about cystic fibrosis. This may be even harder to handle, because the mother may have read one of the more sensational articles about the disease which has stressed the suffering many of these children endure and the extremely high fatality rate. In such a case the nurse can do little but correct any misinformation the mother may have, emphasize the speed with which research is progressing, and point out that some patients are now attending college and leading relatively normal lives. In addition, she can assist the doctor in making arrangements for the other diagnostic tests as speedily as possible, for it is infinitely harder on these parents to be in suspense about



In 1957 there were only 2,158 cases of paralytic polio as compared with approximately 7,000 CF cases. (Figures obtained from Bur. of Vital Statistics.)

CF than to have a definite diagnosis one way or the other.

Hospitalization may or may not be required for the additional tests. In areas where outpatient CF clinics are functioning, the child may be cared for on that basis, but many physicians prefer to have the patient admitted for full diagnostic studies. The tests include chest X-rays, blood tests, stool trypsin tests, possibly a glucose tolerance test, the sweat-bag test, and in some instances duodenal intubation.

From the chest X-rays the physician will learn whether the scarring and fibrosis characteristic of advanced CF cases is evident. The respiratory symptoms are due to blocking of the air passages of the lungs by thick mucus, a fact which has led some authorities to call this disease mucoviscidosis. If the lung involvement appears serious, frequent bouts with pneumonia may be expected, since the child's resistance to infection will be poor and his lung function inadequate.

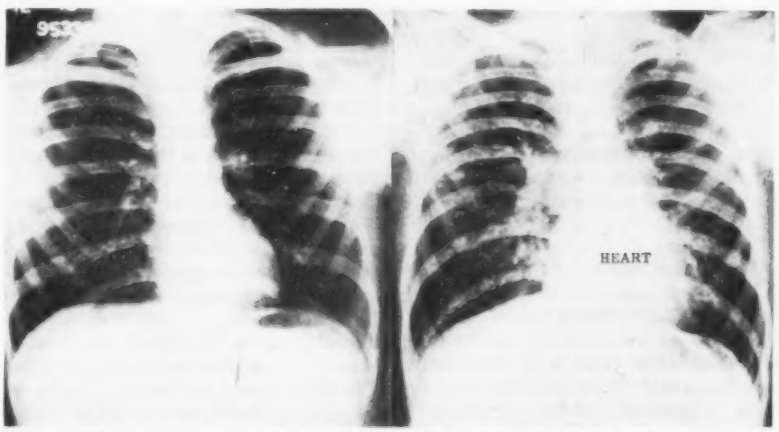
Continuous prophylactic antibiotic therapy will be instituted. In some cases inhalation therapies will be employed in an effort to liquefy the mucus to permit its expulsion by postural drainage techniques and to permit deeper penetration of antibiotics into the far recesses of the lungs where infection is harbored.

Another diagnostic device, the sweat-bag test, as its names implies, is an additional means of determining the salt content of the child's sweat. A small gauze patch is attached to the child's back, and he is encased to his neck in a plastic bag. He is then covered with blankets and allowed to sweat until the necessary amount of perspiration for a reliable sample is obtained. In this procedure the nurse can be especially helpful in two ways. She can explain in advance to the mother what the test involves, so that the mother's mind will be at ease. This will also help the mother prepare the child for the experience if he is old enough to understand it.

The nurse can also help to make the test something of an adventure for the child. The bag may be called a "space suit," and the nurse may join creative forces with the young patient to spin a tale about how he is blasting off into outer space. Since the process normally takes less than an hour, and is no more uncomfortable than a hot, humid day, the nurse may be able to keep the child amused and co-operative during the entire time if she succeeds in keeping his mind off his feeling of confinement. Reading, telling stories, or playing records is often helpful with the patient too young to participate in the Adventure in Space pretense.

Duodenal intubation, used to determine the presence or absence of pancreatic enzymes necessary for digestion, is apt to be an uncomfortable process. Some physicians who feel that the CF diagnosis has been confirmed by the other tests prefer not to perform this test unless absolutely necessary, relying instead on the response to a pancreatic extract to indicate the degree of involvement of the pancreas. Since the same stickiness of mucus which plugs up the lungs also prevents certain enzymes from reaching the intestinal tract, the explanation of the child's poor nutritional state lies in this area.

Regardless of how much he eats, he cannot absorb and utilize his food until the missing pancreatic enzymes are supplied orally. Improvement in digestion may be dramatic, with a reduction in the number and foulness of the stools, decrease in appetite, less abdominal distention, and better weight gain. A relatively normal diet can then be tolerated, preferably one high in protein. Large supplements of aqueous vitamins are advisable because of the child's poor absorption.



X-ray at left shows normal chest; at right, the picture of chest of patient with cystic fibrosis shows cloudiness and scarring, particularly around the heart.

Turn to Nurse

Both the hospital nurse and the nurse in the pediatrician's office may find themselves in the roles of interpreters and comforters if the diagnosis of CF is confirmed. The physician will, of course, explain the disease to the parents, but parents are often too disturbed emotionally to absorb all he says. Then they are embarrassed to ask him to repeat what he has told them and may turn to the nurse for this information. Often, too, it is a matter of pride with the parents to "hold up well" while talking with the doctor. They feel this compulsion less strongly with the nurse, and may unload on her shoulders all the burden of fear and anguish they have concealed from the doctor.

One constructive suggestion the nurse may offer is that the parents become active members of the nearest chapter of the National Cystic Fibrosis Research Foundation.[1] This organization, with over 50 chapters in states from New England to California, is devoted to public education to cystic fibrosis and to conducting fund-raising campaigns for research.

In joining forces with the thousands of others who are working to overcome the same problem, the frightened young parents of a CF child will lose much of their sense of isolation and loneliness. They will feel that they are taking affirmative steps toward helping their own child and the many other children like him. The nurse, in turn, will be able to feel that her warmth and humanity have started one more family on the road to a balanced and resourceful attitude toward the CF problem.

[1]2300 Westmoreland, Philadelphia, Pa.

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What symptoms indicate hay fever and asthma? Have the causes for these allergies been discovered? What is being done to treat them? In the second in a series of four articles on allergy, a prominent allergist discusses the symptoms, possible causes, and treatment of

Hay Fever and Asthma

by **SAMUEL M. FEINBERG, M.D.**
Professor of Medicine, Chief of Allergy Clinic, and Director of Allergy Research Laboratory, Northwestern University Medical School, Chicago, Ill.

EIGHT million people in this country—one out of 20—suffer from hay fever. Conservative figures indicate that at least three million are victims of asthma. The average layman might say, "So what? These are only discomforting afflictions. Why get excited about mere numbers?" The nurse who has had any contact with an asthma patient, of course, knows that it is not merely a question of numbers. But let us look more closely at the ailments themselves.

Respiratory Allergy

Your nose itches and runs and may be stuffy, you sneeze, your eyes may itch. As the season progresses your throat and ears may itch, your nose may become more persistently obstructed so that breathing may be difficult. As a result of the obstruction of the opening of the eustachian tubes back in the pharynx you may encounter hearing difficulties. You may spend sleepless nights and be tired the next day. In some cases the nasal obstruction results in sinus infection. In about one-third or more of these seasonal hay fever cases asthma may finally result.

A condition similar to seasonal hay fever may occur the year round. Actually, the symptoms of this allergic rhinitis are the same as those in seasonal hay fever; the only basic difference is that the allergic cause is nonseasonal in nature. One of the possible complications of this rhinitis is the formation of little growths, polyps, in the nose.

Asthma is a difficulty in breathing due to obstruction in the small bronchi. It may show itself in acute periodic attacks of shortness of breath, cough, and wheezing. The difficulty is mainly in expiration; the chest is distended; and the neck, shoulder girdle, and abdominal muscles are mainly used in breathing. Sticky sputum is expectorated with difficulty. Such an attack may last a matter of minutes, or hours, or days. The attack may not recur for days or months.

The above is a description of only one type of asthma. The symptoms may be mild or severe; they may be persistent and occur continually unless medication is used. There may be no cough or no expectoration. In children fever is a very frequent accompaniment of the asthma attack, and for that reason the condition may often be mistaken for bronchitis or pneumonia. The allergic reaction in the bronchial tubes may show itself as a spasmodic recurring cough. This is particularly prone to occur in children, for months or even a year or two, as the first indication of bronchial allergy, which progresses finally into more typical asthma. Since more than half of the cases of asthma begin in childhood, it is obviously important to realize the significance of these early stages.

The harm done by asthma involves not only the physical suffering of the individual, his loss of work or loss of schooling, his being handicapped in physical activity, his social and mental frustrations, his inferiority complexes and other mental effects, or the tremendous economic loss to the nation which has more than three million sufferers.

The main harm of asthma is its tendency to result in certain complications. The most important and most serious damage is to the lung itself. The stretching and rupture of the walls of the lung sacs, with the destruction of their elastic fibers, ultimately results in a stretched lung known as emphysema. Such a sufferer becomes really crippled. He is short of breath on slight exertion and eventually may become dyspneic at rest. This leads to other complications which may shorten his life.

Mechanism

How does asthma or hay fever come about? The person must be capable of developing an allergy to a contacted substance. Generally this tendency is inherited. (This has been discussed in an earlier article.) We do not know why the person will develop an allergy to a particular substance and not to others. As a result of repeated exposure to that allergy-producing substance (the antigen), let us say the dander from a dog, he develops protein molecules (antibodies) in his tissues which have an affinity for dog dander antigen and nothing else.

When dog dander is inhaled, the antigen and antibody unite in the cells in the nasal or bronchial membrane. This union causes a freeing of a potent chemical substance from the cell, particularly histamine. Within the cell histamine is harmless; when freed, however, it becomes a very active chemical. It dilates blood vessels and causes serum to leak out from the vessels into surrounding tissues.

In the nose, of course, irritation from such swelling produces nasal blockage, sneezing, and running. In

the bronchial tubes the swelling of the mucous membrane would produce difficulty in flow of air. This obstruction of air flow would be increased further by the contraction of the muscle fibers around these small tubes. The bronchial glands which normally secrete a small amount of thin fluid produce an increased quantity of sticky sputum in asthma, thus plugging the fine tubes and constituting a third reason for the difficulties in the passage of the air.

The Causes

Reference has been made already to the constitutional or hereditary tendency required to develop an allergy. The second requirement is the exposure and re-exposure to a substance capable of producing allergy. These may be called the specific causes. Seasonal hay fever or asthma is caused mainly by pollens, spores of molds, and insect dust.

To permit one pollen to land by chance on the female parts of a plant of the same species requires large numbers of wind-borne pollen in the air. Such pollens are small, usually around 1/2,500 of an inch. They are thus inhaled and are capable of producing allergy. The plants producing such pollen are usually drab and devoid of distinct scent because they have no need to attract insects. Those pollens which are large and sticky and depend on attracting insects for cross-fertilization come from plants that are colorful and scented. Knowing this, one can immediately eliminate roses, daisies, cherry blossoms, tulips, lilacs, and similar plants as causes of hay fever.

In a large part of the United States, including the Central States and the East, three major pollinating seasons are recognized. The spring season, about April and May, is usually the mildest and hay fever during this season is caused mainly by the pollens of such trees as maple, elm, poplar, oak, birch, and ash. The midsummer season is usually more severe, from May to mid-July, and here hay fever is produced mainly by the pollen of such grasses as timothy, blue grass, orchard grass, and red-top grass.

In the fall season, from about the second week of August to the end of September, hay fever is due mainly to giant and short ragweed. It is the most severe season and affects more sufferers. In other parts of the country the pollen problem differs in many respects. Among other hay fever producers are tumbleweed, a variety of other trees, Bermuda and Johnson grass, and English plantain.

The amount of pollen in the air determines the degree of suffering of the person allergic to it. The quantity of pollen in the air not only depends on the region, but varies from season to season and during the season. Plenty of rain and plenty of sunshine between rains will produce a good crop of weeds. Extreme heat and drought will discourage weeds or pollen production, as will cold or rainy weather during the pollinating season. A hot summer wind spreads the greatest amount of pollen.

Molds are next in order as causes of seasonal hay fever and asthma. The molds producing such allergy originate mostly on grain crops. That is why the Midwest is the most troublesome area for people sensitive to molds. Many of the spores of molds are as small or smaller than pollen and, therefore, are carried for long distances. The mold season in the temperate zone is from early spring to late fall. His degree of sensitivity mainly determines how long the season will last for the individual sufferer. In the very severe mold allergy case, it may last from March to November, and the sufferer may be free from symptoms only when the ground is frozen or covered by snow.

A third seasonal cause for asthma and hay fever is insect dust. Allergies caused by insects have been known for a long time. Such allergies result from bee sting and the presence of swarms of insects in special regions during certain times of the year—the Mayfly in Toledo, the Caddis fly in Buffalo. Insects encountered in one's occupation (such as the mushroom fly met by mushroom growers) also cause allergy. As a matter of fact, what is apparently the first record of an allergic reaction is a hieroglyphic account on the tomb of King Menes of Egypt indicating that he died from the sting of a hornet in 2641 B. C.

But in recent years it has been noted that many people who have asthma and hay fever show strong allergic reactions to the extracts of a variety of common insects. People allergic to insects, like those allergic to molds, may have a season anywhere from early spring to late fall. Our current thinking is that the dust from top soil or vegetation contains the dried substance of insects which gets into the air and produces this allergy.

Nonseasonal asthma or allergic rhinitis may be produced by a number of allergens. First and foremost in many parts of the world is "house dust." The exact nature of this substance is not known, but we know that in large part it originates from organic substances such as cotton linters in the mattress and furniture. The dandruff of the dog, cat, and horse are common causes. Animals such as the rat, mouse, guinea pig, and rabbit frequently produce allergy in laboratory workers or those who have them as pets. Feathers in the pillow or the down in the sofa cushions may produce allergy. Allergy can be produced also by a host of other air-borne substances, such as the spray of hair-setting fluid, the castor bean dust from factories or its use as fertilizer, the penicillin aerosol, and many chemical dusts in various industries. Wool and furs, so commonly blamed by many people, almost never cause rhinitis or asthma because the process of manufacture has removed the substance (dandruff) causing the allergy.

Foods can also be responsible for allergic rhinitis and asthma and are more likely to be the cause in young children. The older the person, the less frequently is food to be blamed. Severe isolated attacks of asthma and rhinitis are likely to be produced by such foods as fish, shellfish, nuts, and seeds. The more chronic symptoms are likely to be caused by such basic foods as wheat, milk, eggs, potatoes, and beans. But in special instances almost any food may be responsible.

Not all allergic rhinitis or asthma can be explained by things we breathe or eat. In some cases bacterial infection is a cause. In many cases the cause remains a mystery. In some of these puzzles it is suspected that the body forms its own substance to which the person becomes allergic. But much research will need to be done to establish this explanation. Some people are ready to explain all asthma on the basis of emotion or psychosomatic origin. While we feel that nervous or emotional complexes can aggravate asthma or set off an attack, we are hesitant to accept the idea that they are the basic causes. It is much healthier for future progress to admit ignorance than to try to place a dubious label on a disease.

Contributing factors may aggravate asthma or rhinitis attacks. Emotions, weather conditions (humidity, temperature change), dust acting mechanically, chemical fumes, and one's own physical state are among these factors.

Diagnosis and Treatment

In the preceding article we discussed the principles of diagnosis. We can only emphasize several points here. History-taking in the hands of the expert may be the most important diagnostic tool. The examination of the patient to establish the existence of asthma, the types of complications, and other disease obviously requires ripe medical judgment. It is for this reason that the medical man who specializes in allergy must perforce be well trained in internal medicine or pedi-

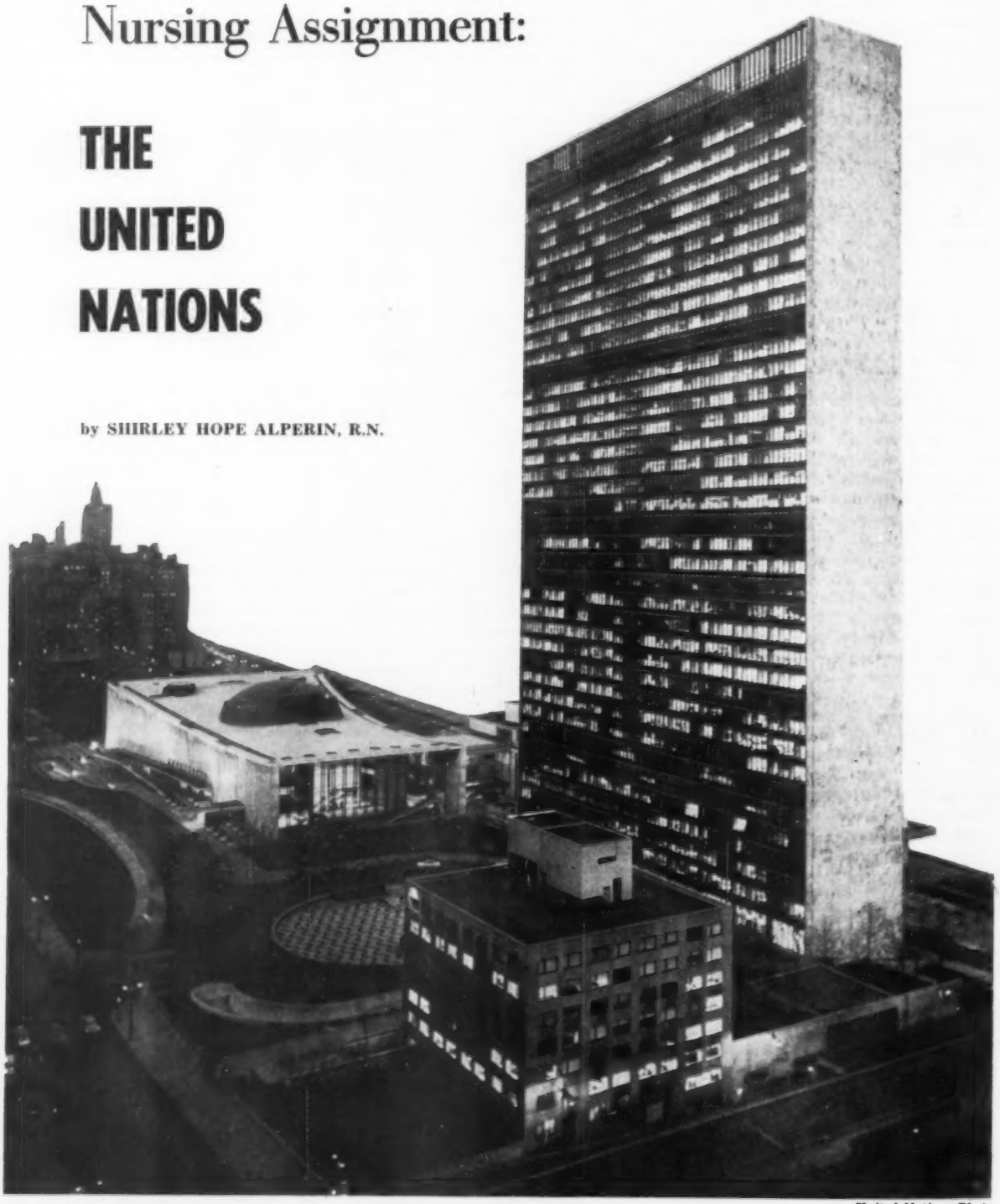
(*continued on page* 33)

'Here we are one big family'

Nursing Assignment:

THE UNITED NATIONS

by SHIRLEY HOPE ALPERIN, R.N.



United Nations Photo

Staff members join Miss Averill to discuss the Health Service. Seated L. to R. are Dr. Michael Irwin, of England; Miss Averill, Matilda Sadicario, R.N., of Manhattan; Barbara Kaiser, X-ray technician; and Leticia Abaquin, R.N., of the Philippines.

SINCE the fall of 1952, when the General Assembly of the United Nations first met at its present site in New York City, millions of tourists have been attracted to the magnificent structures dominating the East River skyline to watch history being made. Should sudden illness or injury strike any of the 6,000 people who are at the U.N. on an average day — whether he be a tourist, diplomat, or staff member — a competent department of the United Nations, its Health Service, is ready to offer medical attention.

Located on the fifth floor of the Secretariat Building, the service is composed of a team of physicians, nurses, and medical technicians who work constantly to promote better health at the U.N.

Head nurse of the Health Service since January 1954 is vivacious Jeanette Averill, R.N. Although she comes from a small New England city, she has an international feeling for the people from 81 countries with whom she deals. "Here, we are one big family!" she says.

Assisting Miss Averill are three other registered nurses. Matilda Sadicario, a personable young woman from Manhattan, joined the staff two years ago. Her proficiency in Spanish helps this former public health nurse to establish better rapport with many of the people seeking medical aid. (Besides being one of the official languages of the U.N., Spanish is also a working language of the General Assembly and the Economic and Social Council.)

Another member of the service, pert Leticia Abaquin of the Philippines, left Manila in 1953 to matriculate at Columbia University for her B.S. in Nursing Education. Beginning as General Assembly nurse, this ambitious young woman worked evenings from September to December while the Assembly was in session. Last January she became a full-time staff member.

Birgit Erikson De Gennaro came to Headquarters from Sweden two and a half years ago, after her marriage to an American student whom she had met at the Sorbonne in Paris. Equipped with a fine sense of humor, as well as a versatility in languages, Mrs. De Gennaro is very popular at the U.N.

Miss Averill and her nurses work with Dr. Szeming Sze, medical director of the service. Of Chinese descent, Dr. Sze was educated at Cambridge and joined the Health Service in 1955. Aline Wolff, administrative officer, assists Dr. Sze in the administration of the Health Service. Also working with him, as full-time medical officer, is Dr. Michael Irwin of England. In addition, a staff of seven consultants (including two women) work on a part-time basis. These physicians, all specialists in their respective fields, see patients at the Health Service once or twice a week. If Dr. Irwin, or any physician, discovers a possible heart ailment in a prospective U.N. staff member during a preplacement physical examination, he refers the patient to the cardiologist for a more thorough examination.

During a periodic check-up, an employee complaining of persistent gastric discomfort will be examined by the gastroenterologist. If he has a suspicious cough, the patient will be examined by a thoracic specialist. Emotional problems are handled by the psychiatrist, Dr. Mottram Torre, who holds bi-monthly consultations. Though the Health Service offers a diagnostic program to workers at the United Nations, it does not function primarily as a clinic. Once confirmation of an ailment is made, the patient is advised to see his family doctor for follow-up care.

Preventive Medicine

Because of its vast number of employees, including a staff of 3,000 at Headquarters, the U.N. maintains specific standards of health for the protection of all personnel. "Preventive medicine is our business," explains Jeanette Averill. Such a program begins with a medical screening of new employees.

Every applicant for a staff position receives a preplacement examination by the Health Service. This examination includes a medical history, a thor-

Jeanette Averill, head nurse of Health Service, inspects sight scanner machine.

ough physical, hemoglobin count, a chest plate, urine analysis, and S.T.S. (serological test for syphilis). Height and weight are recorded, and a vision examination is performed. A young man applying for a job as a messenger will obviously be rejected if he has severe flat feet. However, if he follows suggested treatment on referral, he may eventually be employed. Previously unknown conditions are often detected during the preplacement examination. Contract employees at the U.N. undergo a medical clearance also. They receive chest X-rays and consultations, but not a full examination. At the U.N. there are 500 of these nonstaff employees, including electricians, charwomen, gift-shop clerks, and cafeteria and dining-room personnel.

Periodic physicals similar to the preplacement examination are offered to employees every two years, with 85 per cent of the staff accepting this service. Men and women over 45 years of age are seen by the department every year. Chest plates are mandatory for all at these periodic check-ups, and cervical smears are done routinely on the women. In this way, suspicious ailments are discovered early enough to permit them to respond to treatment. "Mild diabetes, possible hernias, and beginning hypertensions have been found at these check-ups," Miss Averill states. "We encourage people to take care of themselves so they will function better. In industry, when health is good, morale is raised, productivity increases, and there is less absenteeism."

U.N. guards are also trained in emergency first-aid methods. Although no formal lectures on health education are offered to employees, numerous pamphlets on obesity, food, mental health, and related subjects are available to anyone visiting the department.

During an average working day —9:30 A.M.-6:00 P.M.—at the U.N. Health Service, between 50 and 90 patients are usually seen. On weekdays Miss Averill assigns one of her nurses to assist the doctors, who keep appointments both mornings and afternoons. During this time, 10 to 15 periodic physicals are performed.

There are always two nurses in the treatment room who attend employees and visitors seeking relief for headaches, stomach upsets, and general malaise. First-aid therapy also is administered for minor cuts and injuries. Here, from 2 P.M. to 4 P.M. daily, inoculations against infectious diseases are given to United Nations personnel going abroad on missions. This service is also offered to staff members at Headquarters and their families, who generally return to their home countries for vacation every two years. A large world map listing all diseases indigenous to each area is kept in the treatment room. This record helps the nurses to determine what vaccines are to be used for protection against such diseases as yellow fever, cholera, and bubonic plague.

Miss Averill stops to look at the Certificate of Achievement awarded the U.N. Health Service for complying with the standards of medical service in industry.

Before he took his much-publicized tour for UNICEF (United Nations International Children's Emergency Fund) a few years ago, comedian Danny Kaye was inoculated at the service. "How he teased me about my Boston accent!" laughs Miss Averill as she recalls the incident. At another time, when Secretary-General Dag Hammarskjold came for shots before his trip to Lebanon, he impressed everyone with his charm.

Headquarters staff members who go on missions abroad are inoculated against infectious diseases and informed on health and safety conditions existing in the foreign areas they intend to visit. To keep up to date on these conditions, Miss Averill spends many hours researching global epidemiology. If a staff member's family is travelling to a malaria-infested region, she explains the necessary health precautions. Children are instructed not to go barefoot in areas infested with hookworm. On their return from overseas missions, U.N. personnel are required to have a medical check-up.

The entire Health Service staff works as a team. Ruth Peter, a technician from Switzerland, spends most of her day in the laboratory, while X-ray technician Barbara Kaiser does basal metabolism tests, electrocardiographs and all types of X-rays. At her desk in the reception room a pleasant young woman answers the telephone, checks referrals, and gives patients the necessary forms to be filled out. She also makes apointments for physical examinations and consultations. One of the secretaries, from Peru, takes dictation from the physicians and works on insurance and accident forms. There is also a clerk who takes charge of sick-leave recording and filing charts.

Dr. Sze's secretary, who comes from France, handles all his dictation and schedules his appointments. Other of her duties are sorting and routing medical examination reports on U.N. personnel and candidates throughout the world.

At Headquarters every staff member is covered by hospitalization under the United Medical Service or Health Insurance Plan, and the United Nations is protected for public liability by a private insurance company in case injuries occur to visiting tourists.

Delegates Stricken

Staff members at the United Nations are not the only people requiring medical attention. It is no wonder that more than one representative from a member nation has become incapacitated from tension and fatigue during a General Assembly session or a conference where important topics are discussed.

If a delegate becomes ill during a meeting, the Health Service is immediately notified. Last year Indian delegate Krishna Menon was brought to the department after he collapsed at a session of the Security Council. Some time later, after he was treated by his personal physician, the fully-recovered delegate returned to the Council Chamber accompanied by Miss Averill. "On the way, we were surrounded by press photographers," she recalls. "And the next morning I saw our pictures on the front page of the New York Herald Tribune!"

School vacations bring many children to the United Nations buildings. During the Easter holidays this year, more than 6,000 youngsters accompanied by their parents or in special groups came daily. On tours throughout the buildings were Girl Scout troops, church organizations, and high-school classes. Miss Averill reports that the excitement of visiting the U.N. has brought many a queasy boy and girl to her department. The most effective treatment for children with upset stomachs is "bed and basin," provided in a 2-bed unit and in a 3-bed unit. "Vertigo and faintness are common complaints of students who admit that they have gone without breakfast in their eagerness to visit Fifth Avenue, the Empire State Building, and the United Nations," she claims.

According to Jeanette Averill, no babies have been delivered at Headquarters during her four years of nursing at the Health Service. "However, we did have one youngster, a Girl Scout, who complained of severe abdominal pain during one of the tours," she remembers. "The child was rushed to our department for an examination and white count. Both seemed to indicate acute appendicitis, so we referred her at once to a private physician who confirmed the diagnosis and sent her to a local hospital where her appendix was removed. All of us breathed a sigh of relief when we learned the patient was recovering."

Visitors of all ages come to the medical department for service. Among them are elderly women who are unfamiliar with escalators and sometimes are prone to slight accidents. "First time I ever saw stairs moving," exclaimed one such patient.

Not all tourists, however, come for professional treatment. Nurses from foreign countries, as well as American R.N.'s drop in to chat with the girls at the Health Service. A distinguished visitor was Frances Smith, the representative of the American Nurses' Association at the United Nations. (Non-governmental organizations such as the Quakers and A.N.A. send delegates to the U.N. to help them keep abreast of information pertinent to their work.)

Matilda Sadicario, R.N., staff nurse, and Dr. Michael Irwin, full-time medical officer of the service, review findings of an X-ray that has just been developed.

Acknowledgment of the Health Service's high standards is recorded on a large, framed scroll in the imposing reception room. Presented by the Occupational Health Institute, this Certificate of Achievement represents outstanding merit in complying with the standards of medical service in industry. To qualify for such an award, the O.H.I. – an agency established for evaluating medical service units – requires organizations having 100 to 25,000 employees to have facilities for periodic examinations, to operate a well-equipped dispensary, and to maintain a competent medical and nursing staff.

Former Army Nurse

Jeanette Averill, head nurse at the United Nations, was graduated in 1938 from the Lynn Hospital School of Nursing at Lynn, Mass. When World War II came along, she left her position as supervisor of the out-patient department to join the Army Nurse Corps. In 1944 she went overseas and served as an anesthetist at the 191st General Hospital in Paris, where Inez Haynes, now Colonel Haynes, head of the A.N.C., was chief nurse. Soon after, as a first lieutenant, Miss Averill was assigned to Manila in the Philippines, remaining there until November 1945, when she received her discharge from the service.

Following the war, Miss Averill returned to Lynn and resumed civilian nursing. Eager to advance her education, she began summer school under the G.I. Bill, but because of illness in the family, she was forced to delay her schooling. In 1950, however, she enrolled at the University of Pittsburgh, which at that time offered an accredited program in industrial nursing.

While studying for her bachelor degree, she worked week ends as a nurse in various manufacturing plants. After graduation she enrolled in the Yale School of Public Health at New Haven, Conn. In her class were 16 foreign students, physicians, health educators, hospital administrators, and other registered nurses. Her thesis on specialized procedures in record-keeping earned her a master's degree in public health in June 1953.

During her stay at Yale, Miss Averill visited the United Nations on a field trip and became acquainted with its Health Service, never dreaming that one day she would become part of the international organization. Soon, however, she was offered a position there as summer replacement. Following this temporary assignment, she went to Rogersville, Tenn., where the Tennessee Valley Authority was building a steam plant. After seven weeks of duty with the T.V.A., she rejoined the U.N. replacing Marjorie Farrell (now with the polio foundation) as head nurse of the Health Service.

Even while off duty, Miss Averill is never too far from the United Nations. Her apartment is located within walking distance of Headquarters, and even her hobby–collecting U.N. stamps–is related to her work. Her wide range of interests, including books, the theater, and current events, enables her to converse intelligently with the people from many nations who come to the service.

Indefatigable and dedicated workers in their profession, Jeanette Averill and her staff, who represent several of the 81 U.N. member countries, strive for a better world through better health.

The comfort and recovery of the skin-graft patient depends, to a great extent, on the nurse's adherence to some basic principles.

NURSING CARE of SKIN GRAFTS

by **MITZI L. JACKSON, S.N.**
University of Texas, School of Nursing, Galveston, Tex.

WHILE the scope of this article is limited to the nurse's responsibilities to the patient who has been skin grafted, it must be remembered that placing nursing care in rigid compartments accomplishes little. For this reason medical and nursing care is geared to total patient needs, and as such, it is subject to many variations. Since much skin grafting is performed on burn patients, the emphasis will be in this area.

At this point it is necessary to review the anatomy of the skin: Two distinct layers—the epidermis and the dermis—comprise the skin. The epidermis, the outermost layer, is a stratified squamous epithelium consisting of a variable number of layers of cells. The outer layers of cells are practically dead, and are constantly being shed and then replaced by the inner cellular layers of the epidermis, called the stratum germinativum. No blood vessels pass into the epidermis but there are fine nerve fibers between the cells of the inner layers. The dermis is a highly sensitive layer of connective tissue containing blood vessels, lymph vessels, nerves, glands, and papillae.

When the loss of the skin extends through the dermis, regeneration cannot take place from beneath; it must occur from the edges of the skin around the area or, if the area is too large for this, by the application of skin grafts. Split-thickness skin grafts are the most common type. For this the skin is shaved off by a dermatome which cuts through the dermis.

The ideal time for grafting is, very simply, as soon as possible. With burn patients this is usually within three or four weeks. This, however, will depend on whether the patient can stand surgery at this time and whether the areas to be grafted are in a condition to receive the graft.

Basic Principles

After the decision to graft has been made, the nurse's responsibilities will be largely dependent upon the physician's orders. However, as with all nursing procedures, there are basic underlying principles of which the nurse must be aware.

In preparation of early grafting of areas involved in full-thickness burns, a clean recipient base must be provided. This is done by removing all necrotic tissue. This procedure, called débridement, is commonly done in the operating room, usually when the burn is about two weeks old, and is followed by grafting as soon as possible. Subsequent "picking" of the débrided areas to remove dead tissue and exudate may be ordered.

"Picking" is largely the responsibility of the nurse and requires patience and skill. The patient is usually placed in the Hubbard tank immediately preceding "picking." The object of this latter procedure is to cleanse the open lesions and loosen the material to be removed by soaking. "Picking" can be temporarily painful unless the nurse employs extreme gentleness; it is neither pleasant nor esthetic for either the patient or the nurse, and the patient may be acutely aware of this. A cheerful, accepting attitude can be quite helpful to the patient who is revolted by the disfiguration of his body. Also, the nurse can tell the patient about the cosmetic effects of plastic surgery in her efforts to encourage the patient.

After "picking," the lesions are usually covered with sterile, fine-mesh gauze which may or may not be medicated. Medications in common usage for this purpose are Furacin and glycerine. It is important to cut the gauze to the exact size of the lesion and not cover any area that is healing spontaneously. The patch of gauze should never connect two open lesions separated by an area that is healing. This will help prevent the transfer of infection, if present, from one area to another, and will also prevent the maceration of taking grafts. If bleeding is produced during "picking" the nurse should stop right there and not attempt to remove the rest of the exudate. It will loosen with later soakings. When "picking" and "patching" are completed, the entire area is covered with a dry, sterile dressing.

If the doctor orders a twenty-four hour pregraft soaking, the area is covered with a sterile dressing of sufficient bulk to hold the moisture. This may be a Kerlix roll, an abdominal dressing, or

4 x 8 gauze flats. The solutions used are generally antibiotics or normal saline. Neomycin in solution is a common antibiotic used. This solution, which should be kept in a sterile bowl at the patient's bedside, is applied to the dressing with an asepto syringe. Continuous application is essential and all staff personnel, the patient, and his family should be given careful instructions in carrying out the procedure as directed and at the time ordered.

The prevention of infection is an extremely important principle, and the nurse should always be conscious of its application in working with these open wounds. Bacteria need both nourishment and moisture for growth. It is the nurse's responsibility to remove the exudate, which serves as food for bacteria, and to keep the lesions dry, except when solutions are ordered.

The nurse has virtually no responsibilities in the physical preparation of the donor site for the skin graft. Grafts are ideally taken from the thighs or inner aspects of the arms, although this is not always possible. The donor site is shaved while the patient is in the operating room.

If the patient is able to comprehend, an explanation of the mechanics of skin grafting, including illustrations, should be given to allay his apprehensions.

After the skin grafting is accomplished and the patient has been returned to the ward, the nurse's foresight and actions may well be the deciding factor in the success of the operation. The graft may slough, and while this is not always preventable, the actions of the nurse in this area are important.

Rest is the important thing for skin-graft patients. The ultimate success of the grafting depends upon the absence of motion, friction, pressure, or any other kind of trauma. Grafted areas may be covered with dressings or left uncovered, depending upon the circumstances and the physician's wishes. And they must be kept dry.

If the graft is on the head it may be well for the patient to sleep without a pillow to avoid the chances of injuring the graft.

When the grafted area is on the back, many problems are presented. To immobilize the back the patient must remain in bed in a prone position for a few days. This position can be quite uncomfortable but discomfort can be alleviated somewhat by placing pillows under the hips and the tibia. Eating becomes a problem, since the patient must be fed by the nurse and because patients generally do not tolerate full stomachs while in the prone position, the maintenance of good dietary intake becomes difficult. Smaller, more frequent feedings can solve this problem.

A bed cradle must be used to keep the linens from rubbing against the patient's back. After ambulation is allowed, the patient will need help in getting out of bed. This is best accomplished by two people gently turning him so that his legs swing down over the side of the bed and helping him into the position of bending over the bed. Then the trunk of the body is lifted until the patient is upright. Clothing that covers the back should not be worn. For women patients a towel may be tied around the neck and brought down to cover the breasts, with adhesive tape or gauze tied around the waist to keep the towel in place.

When the hands are grafted they are always placed in the functional position and wrapped with gauze fluffs and a boxing-glove dressing, and elevation of the arms is usually ordered. Loss of the use of the hands during recovery creates quite a helpless feeling for the patient even if no other part of the body is involved; therefore, the nurse should boost the patient's morale with a cheerful and pleasant attitude. The patient should be allowed to do as much as possible for himself: Many even are able to hold their glasses between their two "boxing gloves."

When grafts are performed on the lower extremities, the patient is always placed on complete bed rest. Nursing problems, such as positioning of the patient, providing recreational activities, and allowing him as much independence as possible—common to all patients confined to bed—must be dealt with accordingly. The usual considerations concerning prevention of any kind of trauma to the grafted area are to be considered.

When grafting must be done over the knee or elbow the area may be put into a posterior splint to enable complete immobilization. If the grafting is on the arms, the patient is again quite helpless and needs a great deal of attention and encouragement.

Whether or not a skin graft is to be dressed is decided by the physician. If the patient must lie on the grafted part, it is always dressed. Sterile, fine-mesh gauze is usually used to cover the granulated areas between grafts, and again it should be cut to the exact size of the lesion and must not cover a good graft.

In these cases, soaking in the Hubbard tank and then "picking" may be ordered, with the same procedures and precautions stated earlier about "picking" to be followed. In addition, the nurse must be extremely careful not to remove a successful graft. The importance of this cannot be overemphasized. The ability to distinguish between a successful and an unsuccessful graft comes with experience.

Donor sites are usually covered with dry, sterile, fine-mesh gauze that is allowed to remain in place until it comes off on its own accord. The patient should not lie on the donor site as it, too, must be protected from trauma and infection. If the donor site is on the leg, early ambulation is undesirable because it retards the healing process.

Itching and tingling are two of the more common sensations experienced during the healing process; however, they rarely produce severe discomfort. If the patient complains of these feelings, some diversional activity, plus the added information that this indicates the wound is healing, may be the only treatment necessary.

Reactions

Individuals react quite differently to the disfiguring effects of burns. One person adjusts easily, while another becomes depressed. Even when on a ward with a dozen more persons whose lives were interrupted and changed by a burn accident many people will feel completely alone. The change is new and frightening. "Will I have terrible scars? Will my family and friends still accept me? Will I be physically handicapped? How will I pay for the cost of the hospitalization? Suppose I cannot go back to my old job?" they ask. "I may even lose my job if I do not get back to it soon." These thoughts and similar ones occur to all burn patients. It has been said that problems shared are problems sheared. Will your patient want to share them with you? You, as a nurse, with your resourcefulness, the skills you have learned, and the knowledge you hold, can help this patient—it is your responsibility.

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INTERVIEW with Catherine M. Kain, R.N., Nursing Advisor Technical Resources Branch, Public Health Division, I.C.A.

HOW DOES THE I.C.A. PROMOTE WORLD HEALTH?

Catherine M. Kain, R.N., explains the role of the International Cooperation Administration in promoting better health throughout the world.

Q. We in the United States have made vast advances in conquering major communicable diseases and have prolonged the span of life, so that now many of us are apt to be rather complacent. We are apt to forget that staggering health problems—hunger, disease, and ignorance—exist in many parts of the world. As Nursing Advisor for the Public Health Division of the International Cooperation Administration, you have had an opportunity to know about conditions around the world first-hand. In which areas do you find the greatest need for co-operation in solving health problems?

A. There are many areas needing attention. Putting it in rather general terms, I might say that only a minority of the people of the world sufficiently enjoy the benefits of medical science and technology, which can conquer many of the diseases known to man. This minority is to be found in North America and Western Europe. The areas where health problems are greatest are the newly developing nations, such as Thailand, Liberia, Jordan, Iran, Iraq, Indonesia, some of the countries of Latin America, Haiti, Jamaica, and China. And there are several others. The majority of these nations are seeking improvement of one kind or another.

Q. What are some of the diseases that create the most pressing problems in these newly developing countries?

A. Although reliable statistics are not always available in these countries, it is estimated that in some countries 90 per cent of the population carry intestinal parasites, that such intestinal diseases as typhoid and the dysenteries cause illness to 60 per cent of the people in other countries. The incidence of tuberculosis and malaria is high in many countries and a type of sleeping sickness affects the people of several countries in Africa. Yaws and smallpox also constitute a large problem in many countries. Of course, one must remember that sanitation, diet, illiteracy, and economic conditions, on the whole, are responsible for the poor health conditions in these countries.

Q. What do you think is responsible for the tremendous interest in better health all over the world?

A. I suppose we might say the advent of modern medicine is responsible. Modern medicine is hardly 100 years old. In fact, many of the concepts of preventive medicine have come into being in the last 50 years; antibiotics, new types of vaccines, and effective insecticides have been developed only in the last two decades. These advances, plus the health measures undertaken for the benefit of the United States and allied forces in many parts of the world during World War II, are responsible in part for the health consciousness all over the world.

Then, too, public health education has vastly expanded. Health information and public education programs have been made available through various forms of communications, including radio, motion pictures, TV, and rapidly increasing travel.

For the most part, I believe that the devices, knowledge, and procedures used successfully in the United States to bring about the control of major health problems in comparatively short periods of time have made it possible for other nations to attempt to throw off the shackles of indifference and resignation. Millions of people who, for the first time, realize that good health is possible are working hard to achieve it.

Q. Then foreign governments are becoming aware of the need for good health and the costliness of poor health to the nations themselves?

A. Yes, that is true. The humanitarian aspects of any health program should not be minimized—they always form a very important element—but since the health of a nation determines in part its potential for economic growth, the costliness of poor health must be recognized. Many economic losses resulting from the poor health of a people have been computed. For instance, it is estimated that bilharziasis, a debilitating parasitic disease, costs Egypt about $57 million a year, and losses in India from malaria have been set at $224 million a year. In the Philippines, malaria and tuberculosis cost somewhere in the vicinity of $600 million per year.

The economic burdens imposed by disease are becoming increasingly evident, and the United States is recognizing that diseases in other countries are adding to the production costs of products we must import from those countries. The health programs of the I.C.A. are assisting countries in working toward a solution of these economic problems.

Q. Exactly what is the I.C.A.?

A. The I.C.A.—the International Cooperation Administration—is a semi-autonomous unit of the State Department that functions by virtue of the Mutual Security Act. As the name suggests, by special planning and agreement, the United States and the host countries create co-operative programs through which the United States is privileged to

What is the relationship between the I.C.A. and W.H.O.?

How and when did the I.C.A. public health programs originate?

These and similar questions are answered by Miss Kain in this interview with Associate Editor Julie E. Miale, R.N., held just before Miss Kain left for South America.

Symbol of the I.C.A.

share its knowledge and skills with these countries. The I.C.A. also includes programs in agriculture, education, industry, communications, and transportation, but all are not necessarily operating in any one country.

Q. How and when did the public health programs of the I.C.A. originate?

A. The public health programs now in existence really had two beginnings. Shortly after Pearl Harbor, foreign ministers of the American republics met in Rio de Janeiro to discuss hemispheric security and related problems. From their recommendations the establishment of co-operative programs in health and sanitation resulted. To administer these programs, the Institute of Inter-American Affairs was established. Later, as a result of the Mutual Security Act, the Technical Cooperation Administration was created, which finally was merged with the Foreign Operations Administration. The Institute of Inter-American Affairs also became a part of the Foreign Operations Administration. This unified world-wide program is now known as the I.C.A., or the "Point Four" program.

Q. With how many foreign governments is the United States co-operating — through the I.C.A. — in carrying out health programs?

A. Co-operative health programs are presently being carried out in 39 countries.

Q. What is the relationship between the I.C.A. and the World Health Organization?

A. The W.H.O. is a specialized agency of the United Nations which consists of 88 countries, including the United States. The I.C.A. is an agency of the United States Government. Both agencies are concerned with strengthening the health programs of many nations and have common objectives. There are opportunities for co-operation between the I.C.A. and the W.H.O., both at the planning and operational levels. In a few of these programs, personnel from both agencies combine forces to form one group which gives technical assistance to the countries involved.

In other instances, personnel from each agency are asked by the country to help with separate problems. This type of arrangement exists in nursing programs in a number of countries, such as Panama, where W.H.O. consultants are assisting with the development of public health nursing services, and I.C.A. consultants are helping to improve the nursing school and tuberculosis nursing services. The present effort to eradicate malaria is a notable example of the joining of forces of the two agencies, from top planning down to the spraying teams, to satisfy one of the objectives of each agency—improving the health of many people.

Q. What types of nursing programs are presently being carried out under the I.C.A.?

A. There are three areas of activity: public health nursing, nursing education, and hospital nursing service. Within these areas, each country has reached a different degree of development; therefore, the three types of nursing programs are also at various levels of development.

Q. What are the qualifications for employment with the I.C.A.?

A. The requirements for employment are both personal and professional. According to the personal qualifications, the applicant must be a U. S. citizen; she must be able to pass a rigid physical examination; and be flexible enough in her living habits to be able to adapt to the living situations encountered in a newly developing country.

As to the professional requirements, the applicant must have a bachelor's degree; study and/or several years' practical experience in her specialty; recognized competence in public health nursing, nursing education, or hospital nursing service. These are basic requirements. For many of the positions, more study and much more experience are needed.

Q. What salaries do nurses in the I.C.A. receive?

A. This important question is hard to answer since each person is graded on the basis of educational and work background, as well as her present salary. As with most government employment, especially overseas, there are financial benefits which do not appear when salary per se is quoted.

Nurses genuinely interested in the programs of the I.C.A., who believe they qualify, should make an application. The application neither commits the I.C.A. nor the applicant, and it is the only way for any individual nurse to know what salary she will be offered. The range of salary almost guarantees that no nurse would be asked to accept employment at a financial loss.

Q. Must the applicant be able to speak a foreign language?

A. Knowing the language is indeed a great help, but lack of it should not be regarded as a barrier to employment. English is fast becoming a universal language, and it serves

(*continued on page* 34)

THE DYNAMICS OF HUMAN RELATIONSHIPS

Let's talk it over

by **THERESA G. MULLER, R.N.**
Director of Nurses, Sheppard and Enoch Pratt Hospital, Towson, Md.

IN BRIEFING role-players to take their parts during an interview between a supervisor, Mrs. Henry, and a head nurse, Miss Jones, the resource leader asked each one of them to indicate how they saw each other and their roles. Then he told Miss Jones to act as though Mrs. Henry "had it in for her" and to take a positive stand against any criticism of her work. No doubt, difficulties in staff relationships were likely to be brought up in the impending interview with her supervisor.

Leader: You feel sure that you are doing a good job and Mrs. Henry's criticism is bound to be based solely on her dislike for you. In playing your role, then, you will need to respond in the way Mrs. Henry makes you feel. If she makes you feel angry, show it; if she makes you feel relaxed and comfortable, respond accordingly, but keep remembering that she "has it in for you." Because our interpretation of what others think of us is likely to differ from what they really do think of us we need to be prepared for "role flexibility." Any questions?

Mrs. Henry: You have aroused Miss Jones' hostility prior to our interview. Were you concerned that she would not do that on her own?

Leader: I wanted to be sure that you would be dealing with this reaction in the interview. I should ask you and the audience, however, if the situation is authentic.

Participant A: From a psychodynamic and communications standpoint, the personalities would likely behave as you have indicated, whether or not you had briefed them. An efficient, rigid person is bound to be distant with a warm individual.

Leader: You are then pointing to the importance of having these people brief themselves.

Participant B: Are you not likely to create anxiety by asking someone to assume an unnatural role? Such a person may then act hostile and reconcile this with the fact that he is not a hostile person at all.

Leader: In assuming any role, we tend to behave more like ourselves than like the role. Let us see what happens during the enactment of an interview between the supervisor and the head nurse in the conference room behind the one-way mirror on the stage. In this way you will see and hear them without distracting their attention. The supervisor is seated at her desk. Now, have we quite established the nature of the complaints about the head nurse?

Participant C: Complaints have come from the orderlies on the ward that she is most unfair in her dealings with them.

Leader: Please raise your hands in the audience when you think the scene should be cut. The role-players can also indicate the place for stopping the scene. Let us begin.

Mrs. Henry: Good morning, Miss Jones. I'm glad you found the time to come here today. There are a few things I'd like to discuss with you and I thought—

Miss Jones: Is there anything the matter with the ward?

Mrs. Henry: Not really, but there are a few problems that we may need to work out together so that things will go better for you. How do you feel about that?

Miss Jones: About talking them over with you?

Mrs. Henry: Yes, about going over some of the problems together.

Miss Jones: I would like to do that, and we certainly have had some problems recently.

Mrs. Henry: Can you think of any particular one?

Miss Jones: The one that has been the most irritating concerns the orderlies who do not get their work done, even though they have plenty of time to do so.

Mrs. Henry: You say they have enough time. Might it not then be the way they are going about doing their work that is hampering them?

Miss Jones: There are probably a number of reasons for them not finishing their work, but some are a little more obvious than others. We have six orderlies on day duty, four of them on one ward and two on the other. There is more detail work to do on the acute wards, but there are now only six patients on that ward. Six patients and four orderlies, and yet they can't get their work done on time. As usual, we do have nursing students on that ward, and one student seems to be distracting them and thereby troubling me because I do not know what to do about her.

Mrs. Henry: Do you feel that these orderlies are as well informed as they should be about their work?

Miss Jones: We make out detailed assignment sheets for

them and go over these quite thoroughly each morning.

Mrs. Henry: Are they able to handle the work better after you go over their assignments with them?

Miss Jones: I believe so. For example: Mr. Smith was assigned to the sickest man on the ward this morning. Some problems had arisen during the night, so we discussed these and planned together what might be done about them.

Mrs. Henry: How did he feel about that?

Miss Jones: He told me that he was glad to know what to do beforehand.

Mrs. Henry: That is a good example of how to help your personnel understand their work on the ward. I understand, though, that there is not enough of this type of help.

Miss Jones: I think I have been "giving it to them."

Mrs. Henry: Do you feel that there may have been some instances where a little more could have been given?

Miss Jones: Most certainly. No head nurse can anticipate all the things that are likely to happen, and the explanations that may have to be made. No group of orderlies, especially those who are as well oriented as ours, would expect me to anticipate everything in advance.

Mrs. Henry: You certainly have been trying hard, and I do think that it takes effort on our part to do this most of the time. Being in a supervisor's role—

Leader: (after observing a number of hands raised in the audience) That's enough; we shall cut now. Let's check. How many of you feel that we cut it off too soon? (Comments were made that it was cut too soon because very little of significance had yet occurred.)

Leader: How many feel it was cut at the right time? (Comments were made that it was—because hostility was developing in the role-playing—and that enough had been accomplished.)

Participant C: We can discuss the reasons why the head nurse took a role for which she was not briefed.

Participant D: I think the supervisor stood a better chance of establishing rapport by doing it the way she did.

Miss Jones: Just before the scene was cut, I felt myself getting angry at the supervisor because of her inference that I wasn't doing the right things. I was comfortable up to that point, but then I felt like getting away from her.

Leader: It is interesting to note the difference between the perception of the person involved and the perception of the observer.

Mrs. Henry: I felt that I shouldn't go immediately into the problem, but lead into it gradually.

Leader: Several generalizations can be made about the best time to cut a scene. In this instance, we need not have gone as far as we did. We could have cut earlier by asking the head nurse, "How did the introduction affect you? What was your first emotional reaction?" She indicated a strong initial reaction, but I don't think we were generally aware of this.

At the same time, we certainly don't lose anything in a role-playing scene by carrying it on for a time longer. To do this well, though, calls for different people alerted to make specific observations. However, a valuable source of information is the report of the feelings of the players. In the role-playing scene enacted before us, the interview could last 10 minutes or two hours. Then we should consider the time it might take for the head nurse to use her insights on the job.

And so we find that communication skills may be developed and clarified through role-playing. The method is also useful for analyzing a situation and making a prognosis about the future. Moreover, alternative courses of action about problem situations may be tested in advance. Though involving participants in spontaneous productions, opportunities are also provided for healthy ventilation or catharsis of pent-up emotions. Furthermore, magnifying lenses of shared viewpoints contribute to mutual understanding and facilitate evaluation and synthesis of pertinent factors in group situations.

A few important points should be kept in mind during the structuring of role-playing sessions. First of all, the subject to be studied must reflect the experiences of the group members. A leader must be skilled and willing to shift his plans in accordance with the needs of a group. Nevertheless, the group requires his help in focusing on some central problem.

Several criteria are useful as a basis for setting up a role-playing situation. The scene should portray a valid human relations problem that is clear and specific. The solution of the problem should be within the scope of the abilities of the participants; it should also be significant to the role-players.

The leader of a role-playing session may ask himself if the selected situation is pertinent to a meaningful presentation of reality factors of the participants. There is also the matter of helping the role-players participate effectively, while at the same time seeing to it that members of the audience have been properly oriented to perceive the situation and its implications.

Role-playing should not be introduced as a new method or labeled as such. It is naturally set under way by identifying a real problem, while carefully avoiding deep-seated personal crises. The leader should decide whether he is to act a part or merely be a discussion leader. The flow of spontaneity should not be curtailed by briefing the players too much.

Roles are filled by asking for volunteers, or by having the group suggest someone. It is well to assign an unfavorable role to the person with enough status to carry it through without detriment to himself. The leader may take the role himself to get things moving. It helps to start a participant in a role that gives him an advantage. You may find it easier, for example, to have a supervisor play the role of an employer rather than his own supervisory role. After a role has been accepted, the leader may indicate to the player that he should work out his part as best he can to solve the problem.

Before a session really gets under way, a brief scene, which serves as a warming-up exercise may precede the major action. This is usually advisable before presentations to larger audiences, but not necessarily when the audience is small. The briefing of each member on his role may be done by the leader or other members of a cast. A soliloquy helps each member introduce his role to the audience.

The audience also needs to be briefed to perceive the performance. Observers may be assigned to report on the way they think the problem is being handled, why the players behaved as they did, and how they (the observers) would feel in a similar role. The leader may ask each one in the audience to look for certain reactions in a scene for later discussion. He may also ask the members to interrupt a scene by suggested improvement in the action.

A scene should not go on so long that the audience gets restless. A leader may have to be responsible for cutting a scene at first, but later the players and the audience may well share in this responsibility.

In the evaluation and discussion session, the players should be asked about their reactions. Then a large audience may be asked to form small groups to discuss their feelings. When suggestions are made to replay a scene, the same or different players make the changes suggested by the evaluators and then try new approaches to the solution of the problem.

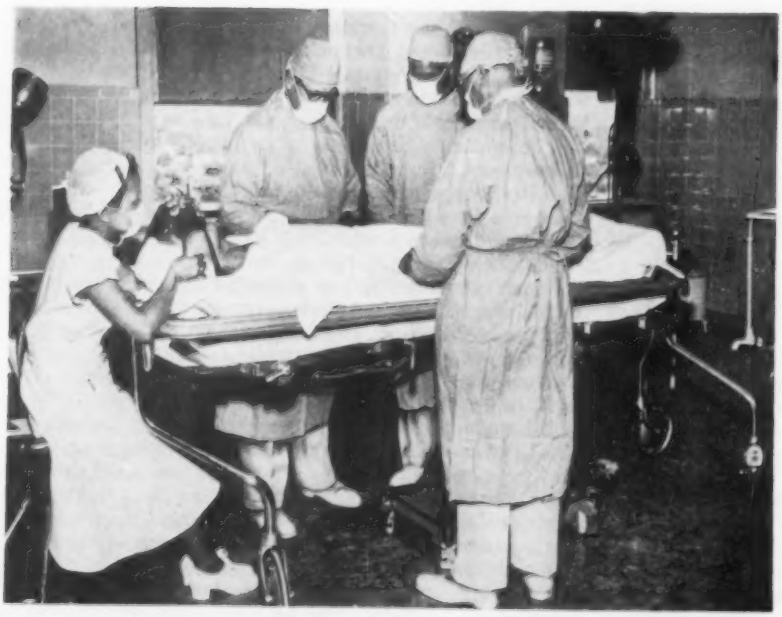
Further consideration of role-playing will be taken up in subsequent articles. The next issue will give the highlights of the discussion following Eleanor Page Bowen's paper, published in this issue on pages 24-28.

The Transaver is easily wheeled by one nurse, who holds the trigger-like handles to guide its course. She does not have to lift or move the patient.

the TRANSAVER

This doctor has invented a simple patient transport apparatus for hospital and field use.

by **DAVID R. LIMBACH, M.D.**
Chief Radiologist, Hurley Hospital, Flint, Mich.



Legs of straddler part of stretcher swing clear of tables. The pan of litter is X-ray transparent, eliminating need to move patient from litter to table.

THAT methods of patient transportation in the average hospital are shockingly primitive, inefficient, and often dangerous becomes depressingly clear when a careful, personal study of the situation is made.

The average stretcher patient undergoes a number of inexpert lifts, pulls, and joggles, onto and off stretchers. (Patient interviews on this subject are quite illuminating.) The trauma patient endures this tragi-comic ritual an average of 10 times. Under such conditions, patients who have the greatest immediate need for full hospital facilities must be denied them, simply because they cannot be moved.

Inexperienced personnel, lacking any knowledge or understanding of the dangers involved, usually are entrusted with this patient handling. Furthermore, very few of them stay on the job long enough to develop any real skill.

Unnecessary patient handling is not only potentially dangerous but, like most inefficiencies, it is costly: The usual employee time is quickly consumed and the work of nurses and doctors is often interrupted because they must be called upon to assist in lifting the patient. It has been found that this extra patient handling costs from $3 per patient, upwards. That may seem to be a comparatively small waste, but projected over a fiscal year, one such case per day amounts to more than $1,000. Forty of these cases would carry a cost in excess of $40,000.

Three Factors

Any solution to the problem of patient transportation must include three interdependent factors: planning, personnel, and equipment. Planning and personnel may be largely dependent upon local conditions, while the equipment factor may be more general in application. After years of study, an all-purpose stretcher—called the Transaver system and now available commercially—has been developed. It can eliminate up to 80 per cent of patient handling.

The mechanical components of the Transaver system are so simple, the function of each part is obvious. The Transaver is completely devoid of gears, cranks, and other mechanical "junk," and has three main elements: the litter, the shuttler, and the straddler.

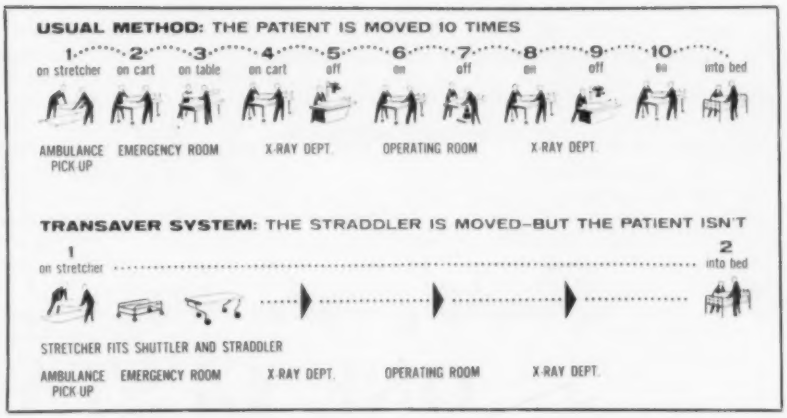
The litter, a strong, lightweight frame of aluminum channel, has carrying handles at each corner and a magnesium plate with a conductive rubber pad which supports the patient. Poles inserted through the handles enable the device to be used for field work. These litters may be stored easily for civilian emergencies—20 nest together in a space about three feet high.

The litter rests on the shuttler, a low

ambulance cart, which is one of several simple arrangements used for carrying the patient and litter outside the hospital.

The third component of the Transaver system is the straddler, which is similar to a hospital stretcher with its top panel removed; it is lightweight and extremely rigid in construction. The litter holding the patient is placed upon the straddler for transport within the hospital. Legs on the straddler lock into position for this transport, and large trigger handles release the legs to swing clear, so that it may straddle examining, operating, and X-ray tables. The magnesium plate and rubber pad on the litter are transparent to X-rays, so that complete examination may be made, unhampered, with any standard X-ray unit. By this simple maneuver, multiple transfers on and off the stretcher are almost completely eliminated (see diagram).

The inefficiency of unnecessary patient handling may be tolerated or go unnoticed until a real emergency arises. Then it becomes highlighted and revealed as it really is—a tragic "bottleneck," which easily may be avoided by a little foresight.



Disaster Aid

During a civilian disaster, an X-ray department in a hospital using the Transaver was able to complete over 900 invaluable diagnostic procedures in a short time, and there were no "bottlenecks" or confusion paralyzing other areas. The X-ray department personnel had become accustomed to using the straddler in their daily work; the large volume of procedures was possible simply because the confusion and delay of lifting patients on and off stretchers had been eliminated.

The straddler had originally been used only in the X-ray department to eliminate the transfer of litter patients on and off the X-ray table. However, after this "acid test," the Transaver ceased to be a gadget and developed into a unified system of daily and emergency patient transport. During emergencies, this system is infinitely expandable, the only limit being the number of litters on hand. It can eliminate 80 per cent of patient transfers and can be made to alleviate three of the largest "bottlenecks" in emergency medical care:

1. The Transaver provides sufficient uniform litters upon which casualties can be safely brought to the treatment center.
2. It eliminates the continual lifting and transferring of patients in the hospital.
3. It furnishes an excellent emergency bed for the patient after his initial treatment and for the patient waiting to be moved to another center.

It is obvious that the full facilities of the hospital cannot be brought to the side of every patient. If they could, there would be no need for the modern hospital. Therefore, the patient must be transported to the hospital in a safe, uniform way and then to other hospital facilities in the same manner. Otherwise, these facilities may as well not exist.

There are several mental attitudes that skirt this problem without facing it. Those having the common "head in the sand" attitude say, "All we really need is a place out behind the hospital to take care of drunks on Saturday night." To them the three-car collision, the railway accident, or civilian disaster are considered remote and unreal. "After all," they say, "our hospital is not equipped to handle such things." But when the time does come, these emergencies must be dealt with and then, too often, with criminal inefficiency.

Another such attitude, the "emergency ward syndrome" is becoming prevalent: "Our emergency ward is so well equipped that we can take care of anything there . . . we don't have to worry about transporting patients because we never even disturb the rest of the hospital."

Carried to its logical conclusion, this attitude would finally result in a second hospital with complete duplication of expensive equipment. When it becomes large enough to be adequate, it will have transportation problems of its own—so we are right back where we started.

There is even the "our surgeons don't have to depend on X-rays, etc." delusion. Yet the common types of injury found on analysis of many military and civilian disasters are, in order of frequency, those affecting the extremities, skull and neck, spine, thorax, and abdomen. All of these demand good X-ray study for intelligent diagnosis and treatment. As emergency conditions increase, the method of time-saving, rapid film analysis becomes even more important. The military have realized this for some time.

Again, there is the "but we have a new gadget" rationalization. "Down in our X-ray department, we have a thing like a crane that picks up a patient and puts him over one of the X-ray tables; it is all done by an electric motor," people with this outlook claim. This may be a spectacular solution for one X-ray table, but how are we to equip the entire hospital and its environs with such cranes? It would be a staggering financial—and electrical—drain.

Finally, there is the "complicated hospital stretcher." The purchasing agent will point with pride to 10 shiny new monsters, replete with gears, motors, and hydraulic tubes (with maintenance and operating manuals attached). They indeed give the casual visitor the impression that "science" has at last arrived. But how are we to use them in even a moderate emergency? Can we instantaneously train a large corps of persons in their management and use? Can we suddenly secure 100 extra units? On what are we going to transport patients into the hospital, and what shall we use for beds? In short, these apparatus are useless when service must be expanded; they cannot serve as equipment in a *system* of transport.

The problem of patient transportation cannot be solved by rationalizations or half measures. The only solution lies in careful planning to fully utilize personnel and equipment. The Transaver system furnishes equipment upon which such planning can be built. Let us banish forever the common sight of a helpless, injured patient being mauled and hauled by pre-Stone-Age methods.

Let's think of this one patient and the hundreds of casualties who may pour into your hospital after a civilian disaster. Let's handle them with at least the care given fresh eggs and dynamite.

An important responsibility of the school of nursing is the proper evaluation of its students and programs.

Teaching—Learning—Evaluation: ONE GESTALT

by **ELIZABETH PAGE BOWEN, R.N.**
Director, Practical Nurse Research Project, Metropolitan State Hospital, Waltham, Mass.

EVALUATION is probably the most difficult task confronting the school of nursing because of the human element involved, the multiple responsibilities, the problem of semantics, and the establishment of sound criteria or standards of acceptable achievement. The multiple responsibilities involve diagnostic and preventive aspects, as well as selective discrimination between those qualified and those not qualified to practice nursing.

The major responsibilities of the school of nursing in the area of evaluation are fivefold:

► The first responsibility is to the society which the school serves, i.e., it should protect the public from incompetent practitioners. In this respect, the emphasis of evaluation is on discrimination between those considered acceptable and those not at the level of competency expected of the graduate beginning her career in nursing.

► The second responsibility is to the students. Evaluation is an essential part of the guidance program, which aims at assisting the student to become self-understanding, self-directing, and self-evaluating, to select that field of nursing where she can find satisfaction arising out of success, and to make the unique contribution to society which she is qualified to make. (From this point of view, evaluation is concerned with the diagnosis of each student's strengths and weaknesses. Evaluation is also preventive in nature. Failure to succeed in a school of nursing can be a traumatizing experience for the student.)

► A third responsibility is to the instructional staff, upon whom rests the burden of evaluation. The school is concerned with establishing an evaluation program which both protects the instructors from the unfavorable emotional concomitants of evaluation and makes available the facilities and requirements for sound evaluation.

► The fourth responsibility of the school is to the nursing profession. The status and standards of the profession will be determined by the quality of the nurses which the schools of nursing graduate.

► The final responsibility is to the school itself. This involves the establishment and protection of its reputation as it relates to the quality of its graduates and the fairness and justice of its relationship with the students. To a considerable extent, this reputation will be a reflection of the kind of tools and techniques used in evaluation and the wisdom with which they are used. The school is also concerned with preventing the withdrawal of students; a high withdrawal rate is costly to the school.

Teaching-Learning Evaluation

The teaching-learning process is concerned with (1) getting to know the student as an individual personality; (2) setting up the purposes or goals; (3) structuring an environment conducive to learning; (4) guiding the students throughout their learning experiences; and (5) evaluating the student's achievement.

Setting up these activities in this order follows an inherent tradition that evaluatioh is something we do at the end or as a final step: Witness final examinations in our courses or rating scales handed in at the end of a period of clinical experience. Closely allied with this tradition is the concept that evaluation is something that we, the instructors, do *to* the students.

Opposed to these attitudes is the idea that evaluation is a continuous process, something we do *with* students. As such, evaluation procedures become important procedures in the teaching-learning process and vice versa. The methods and procedures used in teaching and learning become valuable tools in evaluaton.

Another prevalent misconception is the concept of conformity, which results in rigid patterns of education and lowering of standards to the level of mediocrity. We pay lip service to recognition of individual differences, but fail to practice this philosophy. I might add that conformity to existing patterns may result from the need for security within the group and social approval. Conformity to standards in nursing education has evolved because of lack of standards in schools of the past which, when carried to excess, tends to stifle initiative, individuality, and freedom of experimentation.

What we need is not a swing to either end of the pendulum, but a recognition of the need to include in our standards provision for evaluation of individual differences in programs and in people that will capitalize on their strengths and unique qualities. We need people who dare to be different, who are nonaccepting of the status quo, who have a high degree of imagination and creativity and the courage to fight for changes which will make for progress.

A third prevalent and destructive force in evaluation is the compulsive struggle for perfection, which turns

evaluation into a hyper-critical process of fault-finding. How many of us have lived through a school of nursing experience wherein a call to the director's office always aroused in us the question, "What have I done wrong now?" We also find this attitude prevalent in other social groups.

I lived in such an atmosphere at home, which was reinforced in the training school, and I went through a period possessed by such doubts. "Am I all wrong? Isn't there any good in me?" I would ask myself. And I remember bolstering my ego by saying to myself, "There must be some good in me." I finally resolved the issue, and in the process regained my faith in myself and in others. With it came an understanding of the needs of others. I realized that they, too, had their problems and some of their criticism was not only a projection of their insecurity, but on the part of some, it was a drive to prevent me from realizing their failures.

Opposed to this is the need for all of us to recognize human frailties, to realize that we are not perfect, that we do err at times. With this is the great need to accept people as they are and concentrate on looking for the good in people. But I wonder if we have to go through years of doubt and defensive behavior to arrive at this insight. Can we teach this insight instead of so much rat-maize psychology? I shall propose an answer to this question later on.

Measurement and Evaluation

Before proceeding with the Gestalt of teaching-learning-evaluation, I should like to clarify two terms which are two phases of the evaluation process. *Measurement* is the first term. It is the process of obtaining specific factual data relative to the extent, quantity, or composition of something. This may involve the simple process of counting, or it may make use of a particular instrument of measurement, such as a ruler, a thermometer, a test, etc. Measurement is restricted to obtaining factual data without any indication as to worth or acceptability of the data.

The following are examples of measurement: A two-year-old boy stands on the scales and a weight of 30 pounds is noted; a student answers 50 questions correctly on an examination; a student is late to class on five successive occasions.

The validity of an instrument of measurement will be influenced by the accuracy of construction of the instrument in relation to its purpose; whether or not it is in good working order; and the knowledge and skill of the person using the instrument.

The validity of the child's weight will depend upon whether or not the scales were accurately constructed and in good working order. It also will depend upon whether or not the person weighing the child balanced the scales first and followed the rules for weighing the child with or without his clothes—or without his shoes—as the case may be.

In nursing, deafness on the part of a nurse may invalidate a blood-pressure reading.

The validity of the so-called "Personality Questionnaires" or, for that matter, any questionnaires is influenced by whether the person answering them is really honest with herself or whether she prefers to create a good impression.

Evaluation consists of comparing this factual data with some agreed-upon standards or criteria of acceptability and then drawing a conclusion or formulating a judgment as to the relative merit, quality, or value of the data.

In the case of the child mentioned above, a comparison with the norms for height and weight for a boy of his culture may lead to the conclusion that this child's weight is within the normal limits.

The grading scale for the above examination was A, 75-66; B, 65-56; C, 55-46; D, 45-36; and F, 35 or below. According to this criteria, the student who answered 50 questions correctly would receive a grade of C.

The basis of all measurement and evaluation in nursing education is the observation of behavior. And behavior is the outward expression of an inner philosophy, modified from time to time by the demands of the situation. The inner world of one's feelings, thoughts, beliefs, and interests can only be inferred from observable behavior.

This inference is often colored by the feelings, moods, and prejudices of the person doing the evaluating. Semantics plays an important role because of the lack of common understanding of degrees of values expressed in personality and character traits.

For this reason rating scales set up in terms of observable behavior rather than traits are preferable. Instead of the heading "Emotional Stability," it would be preferable to ask, "How does this person react to pressures and thwarting situations?"

Reliability

The reliability of evaluation is dependent upon the validity of the instruments of measurement used for collecting the data; the preparation and skill of the person using these instruments or procedures; the objectivity or freedom from bias, personal feelings, and prejudices of the person doing the evaluating; and evaluation in light of the total situation. This includes consideration of physical environmental factors and the variables, such as fatigue, emotional upsets, etc., which are present in both the person being evaluated and the one doing the evaluating.

Again using the child who was weighed, we see that evaluation of the child's weight as within normal limits is an objective evaluation, since the scale of values for height and weight are so specific there is no opportunity for personal interpretation. However, further examination into the situation may reveal that the child is suffering from protein deficiency and is in a grave state of malnutrition. Thus the weight due to excessive edema can hardly be interpreted as normal.

Following is another example of reliability: A and B observe C's behavior at a given time. A, who likes dogs, and B, who has an aversion to dogs, observe C rush back into a burning house to rescue her pet dog at the risk of her own life. A interprets this behavior by saying how brave C is, but B interprets this behavior by saying with disgust how foolhardy C's behavior is. Here a single act by C is interpreted by A and B at quite opposite ends of the scale of values because of personal feelings.

In another illustration, we see that Miss D, a graduate nurse, failed completely the entrance qualifying examination to a university school of nursing. Upon further investigation, it was found that such failure was not consistent with the high grades she had achieved in high school and in her basic school of nursing. When she was interviewed, she said that the night before the examinations she had word that a positive diagnosis of tuberculosis had been made on her twin sister and she was so emotionally upset that she could not concentrate on the examination.

The Gestalt

Although it is difficult to diagram a Gestalt, which is greater than the sum of its parts, I have expressed the teaching-learning-evaluation process in the diagram accompanying this article. I shall now explain the relationship of the core, evaluation, to the other activities, together with some principles of evaluation.

Evaluation and the Learner

Two principles which are of significance are (1) The school should aim to select candidates who possess an aptitude for nursing; and (2) Techniques and tools used in selection should be those which will permit as objective an evaluation of these aptitudes as is possible.

Evaluation thus begins with the selec-

tion of the student. Data sought should relate to the ultimate objectives of the school. If the school considers one of the attributes of the nurse to be kindness, evidence of that attribute should be sought in the applicant. Intellectual curiosity may be another such attribute. Each student is a product of her unique past and brings with her unique assets and areas of need. As much data as is possible and reasonable to obtain from a variety of sources should be sought. This is especially true in the areas of emotional behavior, social adjustments, and interests, the evaluation of which is inevitably influenced by the personality of the person making the report. Well-worded questions about behavior reactions, with illustrations of concrete situations, will elicit more objective evidence than more general questions relating to how one feels about the candidate.

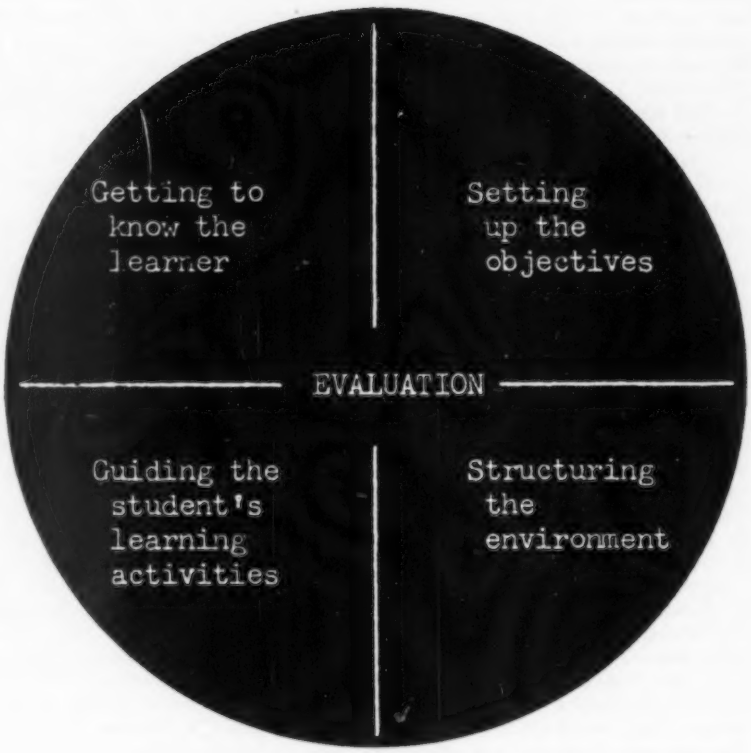
If the same questions (possibly reworded according to the relationship of the person to the candidate) are used on all the various pre-entrance forms and in the personal interview, it will be possible to draw fair conclusions as to the aptitude of the candidate. Such questions as the following can be used:

1. How does she get along with other people? Give concrete illustrations of situations observed. When interviewing the girl, the question will be in the first person or may be reworded to indicate what kind of people she gets along with best, the kind of people she does not get along with well, and why.
2. How does she react to difficult and thwarting situations? Give illustrations. When interviewing her parents, this may be stated, "How does she get along with her brothers and sisters when she cannot have her own way?"
3. Give illustrations of instances when she has accepted responsibility or has not.
4. Is she generally kind and considerate of the feelings of others? Give illustrations of observed situations wherein she has or has not demonstrated these qualities.

The uniqueness of the candidate can be sought from such questions as:

5. What do you consider her greatest assets?
6. What are some of her problems that you think the school of nursing will need to consider in helping her to continue to grow and develop?

If the philosophy of the instructors is one of accepting students as they are and desiring to help them grow and develop, this information should be shared with the instructors and not buried in the files of the nursing school office. An instructor will interpret more thoughtfully the rejection of a cancer patient by the student if she knows the student has lost a loved one from cancer.



Evaluation and Objectives

The first principle of evaluation in relation to the objectives is that the objectives must be capable of objective measurement and evaluation of the degree of attainment by the student. Secondly, all measurement is limited to a sampling of the total outcomes, and the samples selected should be those forms of behavior which are of real significance.

Evaluation includes discrimination in selecting objectives. We cannot cover the whole range of behavior characteristics we think desirable, for it is not humanly possible for instructors and head nurses to assume responsibility for evaluating students on a wide range of headings. It is better to select a significant few on which to concentrate in the limited time available for actual observation of the student.

One area I think of is self-control. Blatz has said: "People come to be known only by the type of emotional reaction which they display under strain. These personality qualities, even more than sheer intellectual gifts, will determine their usefulness in any undertaking. Few of us have learned to manage our tensions."[1]

Some day, I wish someone would experiment with a clinical rating scale limited to three headings. This scale would ask the evaluator to give evidence of how the student has demonstrated the ability to solve problems, self-control under tension and stress, and kindness and consideration for others.

I know the procedurists would throw up their hands in horror if such a scale were adopted. If these are characteristics of success (which we may have to prove first), then these same questions should be asked on our selection records. By evaluating these characteristics at pre-entrance and throughout the program, we can determine continuity of growth and predict the student's success as a graduate.

Setting objectives and evaluating them in the areas of knowledge or understanding and skills is not too difficult, although focusing on really significant ones is not always done. Many can be eliminated if concentration is placed on understanding principles and the ability to solve problems by using sound judgment.

In the realm of attitudes, the problem is much greater, and yet attitudes

are of great significance because of their powerful motivating force. One reason for difficulty resides in expressing attitudes in generalizations which have little meaning and are difficult to interpret. Unless they are specific and clearly understood by teachers and students alike, it is difficult to direct the learning towards them. And exceedingly more difficult to evaluate their achievement objectively.

Consider, for example, the problem of trying to develop an appreciation of individual differences. What is meant here by "appreciation of"? It would be better to express the problem in terms of the specific value desired, that is: To appreciate that no two people are alike in their beliefs, background, and patterns of behavior, and nursing must take into consideration these individual differences.

This is specific enough so that in all teaching of nursing, the approach would first be to try to understand the patient in the light of his likes and dislikes, his particular emotional reactions, and his needs. Then care can be planned and adapted to meet these differences.

Likewise, the attainment of this objective by the student can be evaluated objectively. We can observe whether or not the student knows the patient as an individual and whether she adapts care accordingly. Parentheticalⁱy, it may be added that if we treat students as individuals, with consideration of their hopes and fears, their likes and dislikes, and not condemn them for differences, then they in turn will learn to consider others in this manner.

The third principle of evaluation in relation to objectives is that the ultimate objective of the educational program is to free the student to become a self-reliant and self-directing person.

Here I can illustrate how content and methods of teaching and evaluation are closely interwoven. The basis of this objective lies in self-understanding, including self-evaluation, which in turn leads to understanding others. Thus, the evaluation program is not confined to the techniques we use to evaluate student progress, but is equally concerned with helping students gain skill in objective evaluation of their own behavior and that of others with whom they are associated. In this respect, evaluation becomes an objective.

The basis of this phase of evaluation is placed in such courses in Human Behavior as have been spearheaded by Theresa G. Muller.[2] Because this wealth of material is available to you in her book and in her other writings, and much more beautifully expressed than I can do, I shall not elaborate further.

Another approach has been through the research done at the Newton-Wellesley Hospital in Massachusetts.[3] Here again reports are available to you and I shall not go into detail. Suffice to say, understanding and acceptance of one's true self and understanding and acceptance of others go hand in hand.

Much of the value of this work with students is lost when their instructors and administrators have not gained the same insight into behavior and its evaluation. So, in planning our educational programs, let us not forget to make provisions for these other personnel to grow in understanding of human behavior. As a result of the work with students at the Newton-Wellesley Hospital, seminars are constantly being held for all the professional staff.

If space permitted, I should go on about teacher evaluation. But it is too important a subject to treat briefly. It is enough to say we are evaluated all the time by the students. Some of us are labelled—behind our backs—as "battle axes" and "crackpots," etc. These judgments may or may not be justifiable, and certainly have not taken into consideration "our" total environment. If, however, a sound foundation of human behavior is laid, the give and take of evaluation will be on a more productive level.

Evaluation and Structuring the Environment

By external environment I mean the actual physical world about us: time, space, facilities, the people making up the social environment, the planned courses and methods of teaching-learning-evaluation used. This environment also includes the emotional climate or atmosphere of the classroom, clinical areas, and students' residence. Structuring an environment conducive to learning includes creating a permissive atmosphere in which the student feels free to question and volunteer ideas.

In speaking of the internal environment, I mean the inner worlds of the teacher and the learner, with all their changing variables, the shifting thresholds of frustration and fatigue, interests, beliefs, and attitudes. A change in the inner world, as mentioned previously, finds outlet in behavior which sets the emotional tone of the social climate.

All evaluation requires time, as valid and reliable instruments of measurement as possible, and skill on the part of the persons making the evaluation.

A great deal of time and skill in writing are required to construct good test items. Teachers need time for observation of students in the clinical field and perceptive skill in the use of rating scales. With the shortened work week for staff and students, there is increasingly less opportunity for head nurses to observe students' behavior.

The use of rating scales should include the provision that the rater is free to indicate areas where it has not been possible to obtain sufficient anecdotes to substantiate an evaluation. Some schools of nursing have found that having staff nurses participate in the clinical evaluation (provided they are prepared to do this) has helped with this problem and has increased the objectivity of the judgment. This was done in one school of nursing I know of at the request of the students. Not a few of the problems can be obviated by the construction of objectives, as indicated earlier.

The evaluation of behavioral skills requires that the student assignments include situations that will require these skills and that the teacher can observe. If skill in teaching patients individually and in groups is considered important, provision should be made for students to actually teach patients and community groups.

If evaluation is to be made, the ratio of students to teachers will have to be such that the teacher can devote time to the student while she is teaching. There should be an opportunity for a follow-up of the teaching to determine its effectiveness. This may include visits to the home of the patient after discharge or a report from the public health nurse.

In self-evaluation, the student should ask herself, "In what respects was I successful in teaching this patient? Wherein was I not successful, and what variables contributed to this? What have I learned that will help me to improve my skill in teaching?" Such self-evaluation presupposes an atmosphere free from the compulsion of perfection and the acceptance of the student as a learner or one on her way to the development of understandings, skills, and attitudes or values.

It is important that measurement and evaluation be made in light of the total situation. Variables within the external and internal environments must be considered. In the case of the student mentioned previously who was late to class five times, consideration must be given to the ward responsibilities that may prevent her from getting to class on time. Aggressive behavior may be an outward expression of an inner insecurity or anxiety.

But it may not be so interpreted because no attempt was made to find the meaning or the motivation back of the behavior. The label "aggressive personality" is too often given the individual and too many times there it ends. Or this behavior may be justifiable rebellion against an intolerable situation. It may be the environment needs more thoughtful evaluation.

Since teacher evaluation is by nature

subjective, it is important that the teacher be one whom students trust and whose evaluation they respect.

It is the instructional and administrative staffs that set the tone of the emotional climate of the environment. Respect for the integrity and individuality of the students should be *sine qua non*. Teachers are human beings, too, with their individual needs and emotional problems. It cannot be expected that all teachers will like all students or all students will like all teachers. But students will respect the teacher who understands human behavior, who is genuinely interested in helping them, and who is just.

The good teacher, no matter how old, can put herself back in the position of the student and have empathy for the anxieties, fears, hopes, and aspirations of the young. She does recognize that all learning is fraught with anxiety and tension, particularly in the highly charged emotional atmosphere inherent in the hospital wards.

Evaluation and Guidance of the Learner

The heart of the teaching-learning-evaluation Gestalt lies in the guidance of the student. We can do with limited physical facilities or improvised equipment. But we cannot do without a philosophy of guidance which aims to lead the student from dependence to independence and finally to interdependence. This does not mean being with them every minute and spoon-feeding them. It means knowing when they can be put on their own to try out their wings and develop responsibility. Such assignments include group conferences to discuss what went on, wherein they derived satisfaction, what bothered them, what didn't go well. There should also be a thoughtful analysis of why things went as they did.

The methods used in the teaching-learning-evaluation process should be selected according to the degree to which they implement the objectives. Many of the methods used in teaching can also become important tools in evaluation. Those guiding learning will recognize that final examinations and rating scales submitted at the end of periods of clinical experience lose their intrinsic value in helping the student understand herself. Having the student rate herself can contribute greatly to her skill in self-evaluation.

Burton[4] has proposed a scheme for setting up assignments that I think is valuable, both for assignment and evaluation. He proposes certain requirements which must be completed satisfactorily for a C or passing grade. These plus additional ones for a B grade, and progressively more difficult ones for an A grade. In this way assignments provide a basis of evaluation that the students understand. In addition, they are highly motivating. Examinations can be set up in the same way.

Evaluations should aim at determining consistency of behavioral patterns. Conclusions should be based on repeated observations and not on isolated instances of behavior. We all lose our tempers at times; we all have swings in emotional reactions. But are we consistently depressed? Observation of a deviation from a consistent pattern, once it is known, indicates a need for diagnosis of the problem and further guidance.

I can illustrate this by explaining about a student I once knew. Briefly, the selection devices indicated an outgoing, intelligent girl with many aptitudes indicative of success in nursing. By the end of six months, deviations in this typical behavior became increasingly evident. Her achievement in her science courses was high but considerably below her capacity in the nursing courses. She was increasingly more withdrawn in the clinical experiences, although she gave good care to her patients. She did beautiful drawings in her science courses, and could always be counted upon to make original and delightful posters for school events.

This deviation from a happy outgoing personality was noted and followed up by further psychological testing and interviews. The data showed she entered nursing because her mother was a nurse, but she was not happy in the clinical situation and felt badly about this. She finally was guided into a school for medical artists and has been very happy and successful since then. If the true meaning of guidance had not been practiced in this school, this girl doubtless would have been dropped from the school with a sense of failure.

The purpose of evaluation is to discover and strengthen the assets and unique aptitudes and interests of the student, as well as to correct defects.

Human beings the world over carry on certain common life processes. The interaction of these processes into the Gestalt of the human personality is not the same for any two people, any more than are their fingerprints the same. This individuality of the ego, even our own name, is precious to us. Yet when we assess these differences in others, we tend to look down on them, be it in an individual or another cultural group. Their differences are "queer" to us, with the connotation of inferiority. Yet it is not the common likenesses, but the differences that make us interesting. What a dreary world it would be if we were all alike!

We need to look at these differences for their inherent values and interpret them in the light of the cultural patterns which have influenced their development. Then we should structure the environment to preserve and further develop the unique differences (placing high value on them). Or we can redirect the unfavorable differences into more productive channels, but not to the point of conformity to *our* rigid patterns. Let us encourage the student to be different, in other words, to be her true self.

Every rating scale should include space where the rater can indicate the special qualities or behavior which are strengths and indicate special fields of interest and success. Such evaluations should not be limited to being recorded on the rating scale; they should be freely expressed to the student as the occasion arises. Such a practice will do much to allay the student's fears, build rapport, and motivate the student in a way that cannot be done otherwise.

Conclusion

In conclusion, may I say that to me evaluation is the core whose threads are interwoven throughout the entire teaching-learning process. Let us evaluate evaluation as it contributes to protecting the public; diagnosis, prevention, and guidance of the student; safeguarding the instructional staff; and enhancing the prestige of the school of nursing and our profession.

The interpretation of behavior is a grave responsibility and requires a broad understanding of human behavior. The enrichment of life and the social order comes through cultivation of the wealth of individual aptitudes.

Poorly constructed and/or improperly used evaluation techniques are ethically unjustifiable and may result in serious emotional trauma to the student and to the teacher and unfavorable criticism to the school and the profession. It is better not to attempt evaluation in those areas where it cannot be done properly. No evaluation is wiser than an unjust evaluation. May our justice be tempered with faith and above all, "Let us not forget to be kind!"

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Advances and Trends in

DRUG THERAPY

by JOAN SARVAJIC, R.N.

Formerly Instructor in Pharmacology, Bellevue Schools of Nursing, New York City

Hypertensive Disease—Medical Dilemma

Seventy-five per cent of the cases of hypertension baffle the medical profession, for in three out of four patients no constant underlying disease process can be identified. These are the cases given the time-honored diagnosis of essential hypertension. In this issue NURSING WORLD presents the first in a series of three articles on this medical dilemma. This article will be concerned with present-day theories on the genesis of essential hypertension; in the October issue we shall consider the clinical course of the disease. The management of essential hypertension will be discussed in November.

Hypertension may be defined as a pathologic elevation of the blood pressure, which is an indication of an underlying disturbance of the heart or blood vessels. Hypertensive disease, as opposed to a simple blood-pressure elevation, is a disorder characterized by a sustained elevation of blood pressure and the eventual appearance of cardiac, renal, retinal, and cerebral vascular complications; it is said to occur in about 5 per cent of the adult population.

At birth the normal blood pressure is about 75 mm. of mercury systolic, 40 mm. diastolic. There is a gradual rise of pressure to about 100/60 at adolescence and to about 120/80 between the ages of 20 and 40. There is a further rise of pressure to perhaps 140/90 at the age of 60. Thereafter, the diastolic pressure remains essentially unchanged, while the systolic pressure tends to become higher.

The physiologically important blood pressure is the mean pressure. This is not the average value between systolic and diastolic, but is the average level throughout the cardiac cycle. Since mean pressure can be determined only by direct arterial punctures wtih a suitable recording device, it is measured only as a research procedure. And because mean pressure is usually nearer the diastolic than the systolic value, the diastolic blood pressure is of far greater clinical significance than the systolic.

Mean blood pressure is determined by cardiac output and peripheral resistance. Cardiac output varies as a result of changes of blood volume, emotion, exercise, and a number of disease conditions. The peripheral resistance is composed of several factors—pressure losses as the blood flows through the arteries, arterioles, capillaries, venules, and veins; blood viscosity; and elasticity of vessels. Resistance to blood flow through the arterioles makes up about three quarters of the total peripheral resistance. At a given cardiac output, the resistance varies inversely as the third to fifth power of the radius of these vessels. Thus minor changes in the caliber of the arterioles have a profound effect on the pressure.

Whether the elevated blood pressure in any given person was due at first to an elevation of cardiac output or to an increased peripheral resistance cannot be ascertained clinically with certainty. Determining whether the patient is suffering from hypertensive disease or a simple elevation in blood pressure will depend in the last analysis on the recognition of hypertensive complications in the heart, brain, eye-grounds, and kidneys.

When hypertension is associated with a known primary disease, it is called secondary hypertension. It is thus labelled when associated with:

1) renal diseases (acute and chronic glomerulonephritis, chronic glomerulonephritis, chronic pyelonephritis, polycystic kidneys, renal tumors, periarteritis nodosa, renal vascular anomalies and occlusions, toxic nephroses)
2) endocrine diseases (Cushing's syndrome, pheochromocytoma)
3) vascular disease (coarctation of the aorta, acute porphyria)
4) cerebral lesions (brain tumor, bulbar poliomyelitis).

As previously mentioned, in the larger group of patients, where no pathology is apparent, the term "primary" or "essential" hypertension is applied.

Theories on Hypertension

Theories resulting from observations of experiments on both man and animals have related essential hypertension to the endocrine organs, kidneys, and the central nervous system.

Endocrine Theory

Since it is known that tumors of the adrenal medulla cause paroxysmal or persistent hypertension, Palmer maintains that norepinephrine may be responsible for essential hypertension.

Perhaps more important is hypertension associated with hyperfunction of the adrenal cortex, as exemplified by Cushing's syndrome. Toxemia of pregnancy with its associated hypertension may be related to adrenal cortical steroids which are found in the placenta. In cases of Addison's disease, in which there is a deficiency of the adrenal cortex, the continued administration of the synthetic adrenal cortical hormone, desoxycorticosterone in conjunction with sodium chloride may produce hypertension. The same procedure used for hypertensive patients leads to even further elevation of the blood pressure.

It has been reported that Doca produces hypertension and atherosclerosis in rats. Seleye has postulated that hypertensive vascular disease results from adrenocortical secretion in response to various nonspecific stresses (alarm reaction).

Although as a rule the adrenals are necessary for hypertension, animals have been made hypertensive even after bilateral adrenalectomy. Even more significant is the fact that marked hypertension has persisted in some patients after bilateral adrenalectomy.

Sodium and Hypertension

Although the sodium ion may possibly be related to the development of human hypertension, it is not directly responsible for

DRUG THERAPY

hypertension; in fact, a low-sodium diet has a beneficial effect on many patients with essential hypertension. Yet there is some evidence that there is a low incidence of hypertension in races with a low-sodium intake. This suggests the hypothesis that a minimal level of sodium intake must be exceeded before hypertension develops, although the sodium in itself is not sufficient for this development.

Renal Genesis of Hypertension

The association of hypertension with a variety of intrinsic diseases of the kidney has long been known. In these cases bilateral renal disease precedes hypertension, and is regarded as the cause of the hypertension. However, the mechanism, itself, is not known.

The theory of a renal origin for essential hypertension was given renewed impetus when Goldblatt and his associates induced pronounced and persistent hypertension—when there was no excretory insufficiency present—in dogs by bilateral constriction of the renal arteries. Page induced renal hypertension in animals by investing the kidney with cellophane, thus forming a fibrocollagenous compressing hull. Such experiments led to the concept that human essential hypertension might be the result of renal ischemia. Today, however, this mechanism is no longer regarded as a basic factor in the pathogenesis of essential hypertension.

Further support of a renal basis for hypertension is found in the striking instances when hypertension follows unilateral renal occlusion, as with embolism, thrombosis, atheromatous plaque, or external compression, and in cures of such cases through unilateral nephrectomy.

Renal Pressor Substances

The fact that pressor substances are related to the ischemic kidney in the experimental animal and the similarity of the hypertension induced by such pressor substances to experimental renal hypertension have been advanced as evidence that there is a renal genesis for hypertension.

Grollman and his associates suggested that the kidney normally produces a substance which prevents the occurrence of hypertension; hypertension may follow in the absence or diminution of this renal antipressor substance. The possibility has also been considered that hypertension develops when a normal pressor substance produced by the kidney or elsewhere is abnormally retained because of renal dysfunction. But there is usually no renal impairment in essential hypertension, except in the very advanced stages of the disease.

Renal arteriosclerosis is almost always present when cases of essential hypertension are subjected to autopsy, but the age-old controversy of which comes first, the elevated blood pressure or pathologic changes in the arterioles of the kidney, is still not resolved. Despite uncertainties regarding the exact mechanism relating the kidney with hypertension, the weight of evidence strongly suggests that the kidney may be an important link in the pathogenesis of hypertension.

Neurogenic Factors in Hypertension

Since it is known that sympathetic vasoconstriction of the splanchnic vessels can cause a conspicuous elevation in the blood pressure, it has been thought that the arteriolar constriction of human hypertension was due to this mechanism. This viewpoint has been supported by the observation that a substantial fall in blood pressure follows sympathectomy in humans with hypertension. In man, increased intracranial pressure is associated with elevation of blood pressure, and hypertension may occur in bulbar poliomyelitis and other diseases of the brain. Psychic factors have also been related to hypertension because of their effect on the central nervous system and the fact that they stimulate the secretion of nor-epinephrine.

Other studies, however, minimize the importance of the sympathetic nervous system in the pathogenesis of essential hypertension. The fall in blood pressure following sympathectomy in clinical hypertension is often absent, insignificant, or transient. There is, as yet, insignificant evidence that the central or sympathetic nervous system plays a primary role in the production of essential hypertension.

Humoral Mechanisms of Hypertension

More direct support for a humoral mechanism in hypertension is provided by the discovery of a number of substances which are believed to account for experimental renal hypertension. The following scheme has been evolved:

1. Renin is an enzymatic substance formed in normal and hypertensive kidneys which enters the blood stream through the renal vein and acts upon
2. hypertensinogen (renin activator), an alpha globulin produced in the liver and found in the plasma. This produces
3. hypertensin (angiotonin), a polypeptide which is a powerful pressor and vasoconstrictor. This can be inactivated by
4. hypertensinase, an enzyme produced by normal kidneys and other organs, and found in the blood.

Other pressor substances obtained from the kidneys have been suggested as possible agents in the mechanism of hypertension. These include the vasoexcitor material (VEM) of Shorr, et al., and pressor amines reported to result from defective deamination of amino acids in the anoxic kidney.

A host of other pressor substances have been discovered, but there is no consistent association of any of them with hypertension. Antirenin, an antibody to renin, has been described and is capable of neutralizing the pressor effect of an intravenous injection of renin. A possible relation of hepatic metabolism or hepatic detoxification of sex hormones and hypertension is suggested by the finding of a remarkably low frequency of hypertension and cardiac hypertrophy in autopsies of women who were found to have subchronic hepatitis.

A causal relationship between these humoral agents and experimental renal hypertension is probable; their significance in human hypertension is hypothetical.

Etiology of Human Hypertension

Although hypertensive disease is somewhat more common in women than in men, it is a more serious affliction for men. Probably the most important of all predisposing factors for the disease is a strong familial tendency. Ayman's studies indicated that if both parents had hypertension, 46 per cent of the children had hypertension; when both parents were normotensive, there was only a 3 per cent incidence of hypertension in their children.

Although no age is immune to hypertension, the vast majority of patients develop it during their forties, or later, with hypertensive disease which appears after the age of 50 usually following a benign course. The incidence of hypertensive disease is considerably higher in patients with diabetes mellitus, gout, and in the obese. The European and North American white populations have a somewhat higher incidence of essential hypertension than certain Indian, Chinese, African, Philippine, and North and South American people. The characteristic constitutional type is the stocky, thick-set, ruddy-complexioned person who is energetic, aggressive, and a go-getter.

Suppressed hostility, suppressed aggression, and emotional lability are supposed to characterize the typical hypertensive emotional pattern and have been credited with specific etiologic significance. It seems more plausible to regard the emotional patterns as a frequent but not universal setting for hypertensive disease.

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SERPASIL — ANTIHYPERTENSIVE AGENT

DESCRIPTION: Serpasil is a commercial preparation of purified crystalline extract from the powdered root of the Indian plant Rauwolfia Serpentina.

ACTION AND EFFECTS: The drug is thought to act on the hypothalamus, causing central sympathetic inhibition and perhaps parasympathetic stimulation. It diminishes reflex vasomotor responses, but may act directly on the blood vessels, independent of nerve supply. Serpasil reduces sympathetic activity by blocking afferent impulses at some central site; as a result there is a fall in blood pressure and bradycardia. A useful action is its so-called "tranquilizing effect." The drug may require several days to weeks before its effects appear, and the effects may also be slow in disappearing.

USES: Serpasil is used chiefly in the mild or moderate forms of hypertension, particularly in the labile hypertension of the di-encephalic type. It is used in combination with ganglion-blocking agents and helps to combat the constipation caused by the latter.

Serpasil has also been used most successfully in combination with veratrum and/or hydralazine, neutralizing the tachycardia and preventing headache caused by the latter. To control hypertensive crisis, the intramuscular or intravenous administration of reserpine has been used. According to some observers the hypotensive effect of reserpine preparations is no greater than that of a mild sedative.

PREPARATIONS: Serpasil is available in tablets containing 0.1 and 0.25 mg.

DOSAGE AND ADMINISTRATION: The initial dose of Serpasil is 0.5 mg. daily, divided into one to four doses; 0.25 mg. may be given in the morning and again after the evening meal. This regimen is continued for at least three or four weeks, but if there are unpleasant side actions the dose is decreased to 0.1 mg., twice daily. If there is no such effect, the dose is increased, but never to more than 1.0 mg. per day. Since a satisfactory response may require four to six weeks, drastic changes in dosage and the addition of other drugs should be deferred until that time interval has elapsed.

TOXICITY: The most common annoying side action of Serpasil is nasal congestion and stuffiness. Diarrhea or irritability of the bowel has been an annoying symptom in a few cases, but generally this can be controlled by reducing the dosage.

Drowsiness, fatigue, increased appetite and weight gain, mental depression and apathy, and occasionally unpleasant dreams or nightmares have been encountered. In rare instances jitteriness or anxiety—and in men a decrease in libido without impotence—has been observed.

PRECAUTIONS: The nurse should be aware of the fact that on rare occasions suicidal and paranoid tendencies have been noted; proper precautions against these tendencies must be taken.

VERALBA — ANTIHYPERTENSIVE AGENT

DESCRIPTION: Veralba, one of the many veratrum compounds now on the market, is a pure crystalline alkaloid consisting of protoveratrine A and B, obtained from the roots of the veratrum album.

ACTION AND EFFECTS: This drug reduces the blood pressure of hypertensive individuals by reflex depression of the carotid sinus and the consequent inhibition of its effector vasoconstrictor nerves. It produces cardiac slowing by a reflex mediated through the vagal cardioinhibitory nerve. The vasomotor center in the medulla, as well as the carotid sinus, may be involved in these reflexes. The decline in blood pressure is associated with a reduction in the peripheral resistance, which is evenly distributed through the vascular system, and with a moderate decline in cardiac output.

Veratrum compounds, in doses which are fairly close to those producing the hypotensive effect, also stimulate the emetic center.

USES: Veralba was formerly used alone for its hypotensive effect, but increasing tolerance and the small range between the hypotensive and emetic dosages minimized its usefulness. At the present time veratrum compounds are indicated chiefly in combination with Rauwolfia or with Rauwolfia hydralazine for the treatment of mild or moderately severe cases of benign hypertension. However, their usage has diminished sharply.

The bradycardiac effect has been useful in hypertensive patients with tachycardia. Veralba has been especially useful, through intravenous administration, in acute hypertensive crises and in patients with hypertensive heart disease who develop acute failure.

PREPARATIONS: Veralba is marketed in tablets of 0.2 and 0.5 mg.

DOSAGE AND ADMINISTRATION: Veralba is usually administered orally, one tablet after each meal and on retiring. The doses increase gradually, at one tablet per day, over three-or-four-day intervals until the desired hypotensive effect is achieved or unpleasant side actions occur. As a rule 1.5 to 3 mg. daily of the drug is an adequate dose if the drug is tolerated. Smaller doses may suffice and nausea be less troublesome, if Veralba is combined with preparations of Rauwolfia. The dosage must be carefully regulated by continuous trial in order to obtain the desired effect without disabling side actions.

When used for emergency treatment of acute hypertensive crisis in essential hypertension, glomerulonephritis, or toxemias of pregnancy, the drug is usually given intravenously. Two mg. of Veralba is dissolved in 200 cc. of a solution of 5 per cent glucose in water or physiologic saline and administered by slow continuous drip beginning at the rate of 3 to 6 cc. within 10 minutes.

TOXICITY: Acute hypotension is a problem only when the drug is administered intravenously. Nausea and vomiting occur frequently with oral preparations; in addition, salivation, hiccough, and substernal burning have been noted. Marked bradycardia and the occurrence of cardiac arrythmias with Veralba suggest that the drug should not be used when digitalis is also being administered.

PRECAUTIONS: In order to avoid gastrointestinal side effects, it is best that the nurse administer the drug after an early breakfast, four hours before the evening meal, and on retiring.

The nurse should be prepared to aid in combating acute hypotensive effects by keeping phenylephrine on hand. This is administered in a dose of 5 mg. intramuscularly. Severe bradycardia may be overcome by the intravenous or intramuscular injection of 0.4 mg. of atropine sulfate.

ANSOLYSEN — ANTIHYPERTENSIVE AGENT

DESCRIPTION: Ansolysen is known chemically as pentamethylene pyrrolidium and pentolinium tartrate.

ACTION AND EFFECTS: Ansolysen is a potent agent which suppresses or inhibits both sympathetic and parasympathetic impulses by blocking the ganglia of the autonomic nervous system. Arteriolar constriction is thus diminished, the peripheral resistance is reduced, and the blood pressure is lowered. Cerebral blood flow is diminished; cardiac output may be initially increased but is then decreased; and orthostatic reduction in blood pressure is especially marked.

Renal blood flow diminishes despite a slight diminution in renal vascular resistance. In addition, the cardiac rate is slowed and the force of cardiac contraction diminished.

USES: This antihypertensive agent is indicated in the treatment of severe forms of benign hypertension, especially in the malignant phases of hypertension. In the benign form of the disease this agent is not used unless Rauwolfia preparations, alone or in combination with veratrum and hydralazine, have been found unsatisfactory.

Although Ansolysen is contraindicated in the presence of uremia, this does not preclude its use in cases of malignant hypertension with good renal function, with compensated renal insufficiency, or minimal azotemia. Ansolysen may be used in a case of hypertension that has not responded satisfactorily to the rice diet, extremely low-sodium diets, or sympathectomy. It may also be useful in the treatment of acute hypertensive crises, although protoveratrine has been generally preferred.

PREPARATIONS: Ansolysen is available in 20-, 40-, and 100-mg. scored tablets. It is also sold in 10-cc. vials containing 10 mg. per ml. for subcutaneous or intramuscular use.

DOSAGE AND ADMINISTRATION: The initial dose of Ansolysen is 20 mg., three times daily. Some authorities advise its administration when the stomach is empty, but it has also been given after meals. The dose is raised gradually every few days by increments of 20 mg. until the systolic blood pressure of a patient in an upright position two to three hours after a dose of Ansolysen is 110 to 130 mm. Hg. An effective dose in many patients is 100 mg., three times daily, although each case must have an individually determined optimal dosage.

It has been recommended that for patients over 70 years old the initial dose be one-third of that usually employed; it should be half of the usual initial dose for patients on a low-sodium diet or who have previously had a sympathectomy.

TOXICITY: Side actions of Ansolysen include constipation; nasal congestion; blurring of vision due to loss of accommodation; dryness of the mouth; and impaired sweating. Anorexia, urinary retention, and impotence have also been reported.

Postural hypotension is particularly disturbing and may be characterized by weakness, nausea, dizziness, palpitation, and tachycardia, but especially by faintness or syncope.

PRECAUTIONS: Occasionally there is a sudden blackout and syncope without warning, which may result in injury.

The patient should be told that the peak action of Ansolysen occurs from two to four hours after ingestion, so that the patient will be ready to assume the recumbent position, should there be any warning signs. Severe hypotension that does not respond to recumbency should be treated by intravenous Levophed until it is certain that the action of Ansolysen is completely dissipated.

APRESOLINE — ANTIHYPERTENSIVE AGENT

DESCRIPTION: Chemically, this drug is known as 1-hydrazinophthalazine or hydralazine.

ACTION AND EFFECTS: The method of action of Apresoline is uncertain. However, it appears to inhibit humoral pressor agents and may inhibit sympathetic vasoconstrictor impulses from the central nervous system, thereby reducing the blood pressure. It may also act directly on the smooth muscles of blood vessels to release tone. Apresoline causes tachycardia and significantly increases the cardiac output, increases the renal blood flow, and may also have a selective action on the renal vessels, independent of the increase in cardiac output.

USES: Hydralazine is rarely used alone because of its unpleasant side actions. It is occasionally employed in combination with reserpine and veratrum drugs in the treatment of benign essential hypertension, and it has been used in combination with the ganglionic blocking agents in treating the more severe types of essential hypertension, especially the malignant phase of hypertension.

PREPARATIONS: Apresoline is marketed in tablets of 10, 25, 50, and 100 mg. each.

DOSAGE AND ADMINISTRATION: Usually a 10-mg. tablet is given four times daily—after meals and at bedtime—for several days. The dose is first increased to 25 mg. at two of the four daily administrations, then at all four administrations (at three- or four-day intervals). After a week or 10 days, each dose will be up to 25 mg. This method of increasing the dose is continued until the patient is receiving a dosage of 75 to 100 mg. of the drug four times daily. A satisfactory hypotensive result may not be reached until Apresoline has been administered at the greatest tolerated dosage level for four to eight weeks.

TOXICITY: Headache, tachycardia, and palpitation are frequent side actions of Apresoline, with instances of dyspnea and anginal pain also reported.

Other toxic effects include dizziness, faintness, numbness or tingling of the extremities, malaise, depression, disorientation, and anxiety. There have been rare cases of noted nausea and vomiting, edema of the ankles and eyelids, flushing, nasal congestion, lacrimation, conjunctival infection, and skin rashes. Rare instances of hiccough, drug fever, periosteal edema, pain in the back of the neck, shoulders, and arms have also been reported. Furthermore, anemia, pancytopenia, and acute psychoses have been noted.

PRECAUTIONS: After prolonged use of the high dosages of Apresoline, rheumatoid arthritis with fever may appear. If the drug is continued, a syndrome resembling that of lupus erythematosus may develop. This syndrome may be satisfactorily controlled by discontinuing the drug. The remission may be aided by the administration of corticotrophic hormones.

Hay Fever and Asthma

(*continued from page* 11)

atrics. Skin tests are far from infallible, but neither is the electrocardiogram or the blood count. And we would hate to practice medicine without these aids. But all these laboratory procedures require experts to interpret them properly.

In the management of hay fever and asthma one can treat the symptoms or deal with the basic cause. In hay fever and allergic rhinitis various antihistamines are the chief drugs used. Antihistamines frequently produce undesirable effects and are not effective in all stages. Nose drops or sprays which shrink the membrane should not be used in nasal allergy under ordinary circumstances. They tend to promote increased swelling when their effects wear off in an hour or two. Sprays of antihistamines or hydrocortisone are helpful at times.

The usual drugs employed in asthma are ephedrine and aminophylline orally; sprays of Isuprel, Norisodrine or epinephrin; iodides; injections of epinephrine intramuscularly or aminophylline intravenously; and the use of sedatives. Morphine and other related drugs can be dangerous in asthma because they depress respiration and the cough reflex and may produce spasm of the bronchi. The antihistamines are of little use in most cases of asthma, and in some may even make things worse.

Cortisone and related steroid hormones are effective, but should be used only in a prolonged attack or in chronic resistant asthma. The cortisone-like drugs can produce many undesirable effects, such as moon-face, spread of infection, gastric ulcer, diabetes, bony changes, and psychoneuroses. But with good medical observation these drugs can be a great help in stubborn cases of asthma and even allergic rhinitis. One thing to remember is that these drugs do not act quickly. They require from several hours to two or three days to take effect. Therefore, they are not of any value in acute asthma for immediate relief or in acute allergic emergencies.

For lasting effects in asthma and hay fever we have to deal with the cause. The first principle is elimination. We remove a food, or change the pillow, or enclose the mattress in a plastic casing, or give away the dog. In occasional instances it may mean a change of occupation. Filtration of the bedroom air or that of the whole house may exclude pollen or mold spores sufficiently. A change of climate may be necessary in selected cases, temporarily or permanently. But such steps must be rational. The necessity for a climate change or the choice of the locality can only be determined by a thorough study of the particular patient's case.

With certain air-borne causes of allergy immunization is indicated. This is particularly true of those who are allergic to pollens, molds, insects and house dusts. The principle consists of building up an immunity by injection of the antigen, beginning with very small amounts at short intervals and increasing the amounts and lengthening the intervals. Most sufferers obtain enough protection to relieve them of their major symptoms. It is true that the treatment is long and may require years, but it is at present the best means for preventing hay fever and asthma in these sufferers. After such treatment these patients may stay relieved for periods varying from months to several years and even permanently.

We know a great deal about allergy and much good can be done on the basis of our knowledge. There are many things, however, which are required to perfect our understanding and treatment of these sufferers. We need to know more about basic mechanisms, more about new external sources of allergy, the possibility of allergy arising from internal sources, the nature of infection as a cause, better and safer symptomatic remedies, simpler and more effective desensitization, and the substance which produces spontaneous relief in asthma (as happens after fevers, etc.).

Many institutions are actively engaged in research on these and other items pertaining to allergy. In recent years two organizations have assumed leadership in aiding this research program. One is the Institute of Allergy and Infectious Diseases, which is a part of the United States Public Health Service. The other is the Allergy Foundation of America (801 Second Ave., New York). This foundation is educating the public by a series of pamphlets, by radio, television, and newspapers, by helping to increase facilities for training of specialists, and by supporting research.

NURSING WORLD Reports . . .

(*continued from page* 6)

standing of the person, mentally and physically, and the interaction with him . . . as we assist him in obtaining and maintaining optimum health and happiness. It is the personal feeling of satisfaction and accomplishment derived from devoting my knowledge, time, and energy to the betterment of mankind, through nursing."

Nursing Services Appointment

Martha Hilda Bardenhagen recently joined the staff of the Pacific Area Nursing Services, and has been assigned as a nursing representative to Arizona and Utah.

Miss Bardenhagen, a graduate of Johns Hopkins Hospital School of Nursing, Baltimore, Md., received a B.S. in Nursing from Johns Hopkins University. At the time of her appointment Miss Bardenhagen was supervisor and instructor at Johns Hopkins Hospital.

Teacher-Training Seminars

The National League for Nursing and the American Psychiatric Association are co-sponsoring a series of seminars designed to train nurses in mental hospitals who are responsible for teaching psychiatric aides.

The first six seminars, made possible by a grant from the National Institutes of Mental Health, have been held in mental hospitals in North Carolina, South Carolina, Tennessee, and Arkansas during the summer. More are being planned for the fall.

Car Allowance Schedules

The American Nurses' Association reports that 41 state nurses' associations have subscribed to the A.N.A.'s service of providing standard car allowance schedules appropriate for individual states.

The service was first made available two years ago at the request of public health nurses who sought assistance in obtaining adequate reimbursement for using their cars in their work.

Indonesian Red Cross

The Indonesian Red Cross has, for the past year, been giving its full 28-hour advanced course for home nursing instructors to members of Indonesia's police force. The policemen are taking the course as a precautionary measure in case they are called upon to aid sick members of their families.

New Pediatric Practices

The program for the children's unit of the University of Wisconsin Hospitals includes two departures from traditional hospital procedures.

No longer are there specified visiting hours for parents; they may visit their children any time they wish, thus elimi-

nating much anxiety in the parents. This also results in a general easing of the adjustment problems of children.

The second innovation is supervised play under the guidance of a nonmedical child expert. Mrs. Marie Evans, who holds a master's degree in child development from the University of Wisconsin, is "play-lady" for the children, and supervises them as they play in a sunny room at the end of the wing. No member of the medical or nursing staffs is allowed to enter the playroom which serves as an "island of security," according to Dr. Nathan Smith, chairman of pediatrics at the university.

P.N. Recruitment Rally

Wilkie Hughes, field representative of the National Association for Practical Nurse Education, Inc., was in charge of the Practical Nurses Recruitment Rally which was held recently at the New York Academy of Medicine Building, New York City.

An estimated 1,000 persons, 500 of whom were high school students, heard Dr. Irving Starin of the New York City Department of Health discuss "The Health of Our City." Student representatives from 12 approved schools of practical nursing in Metropolitan New York, which co-sponsored the rally with the NAPNE, told how they had become interested in practical nursing as a career and described the satisfactions they expect to receive from such a career.

CLASSIFIED ADVERTISEMENTS

SUPERVISORY, O.R., & GENERAL DUTY NURSES: Positions in general hospital, suburb of Washington, D.C. New air-conditioned wing, piped-in oxygen, nurse-patient intercom, 40-hour week, merit increases. Nearby universities for continued education. Director of Nursing, Suburban Hospital, Bethesda, Md.

DIRECTOR OF NURSES: B.S. degree in Nursing Education and experience or Masters Degree. Salary open. 40-hour week. Good personnel policies. Hospital fully approved by J.C.H.A. Dixon Public Hospital, Dixon, Ill.

INSTRUCTORS: Medical — Surgical — Obstetrical — Operating Room. Should have a B. S. degree in Nursing Education and a minimum of two years' experience in two of the following positions: Instructor, Assistant Instructor, Head Nurse. 366-bed private general hospital with expansion program to be completed soon. 150-student School of Nursing with three-year diploma course. Contact Personnel Department, Milwaukee Hospital, 2200 West Kilbourn Avenue, Milwaukee 3, Wis.

DIRECTOR, SCHOOL OF NURSING AND NURSING SERVICE: School fully accredited by the State with provisional accreditation by the N.L.N. Hospital fully accredited by JCAH. Diploma School of Nursing. Affiliated with nearby college. Good salary with complete maintenance. Pleasant working conditions. Apply Director, Grace Hospital, Richmond, Va.

BARNES HOSPITAL: Offers to graduates of accredited schools of nursing a comprehensive course in anesthesia, embracing administration of nitrous oxide, ethylene, cyclopropane, ether, barbiturates, etc. Modern techniques taught include face-mask, endotracheal, intravenous, rectal, etc. Write to Mrs. Dean Eberhardt Hayden, Director, School of Anesthesia, Barnes Hospital, St. Louis 10, Mo.

NURSING ARTS INSTRUCTOR: Three-year diploma program in 310-bed general hospital. M.A. degree desired, B.S. and experience required. Flexible teaching methods. Just 45 minutes from New York City. Salary open. Apply Director of Nursing, Stamford Hospital, Stamford, Conn.

CLINICAL INSTRUCTOR, Medical and Surgical Nursing. Also **PEDIATRIC INSTRUCTOR.** B.S. degree required. 250-bed hospital. Meets minimum State standards. Apply Director of Nursing, St. Mary's Hospital, West Palm Beach, Fla.

DIRECTOR OF NURSING: 129-bed JCAH accredited general, voluntary hospital. Salary open, commensurate with experience and background; attractive residence near-by. Minimum B.A. degree. Liberal vacation, sick leave, other allowances. Apply Administrator, North Adams Hospital, North Adams, Mass.

DIVISIONAL ADMINISTRATOR: Psychiatric and neurologic nursing, including service and education. Salary upon request. Apply Director, Cook County School of Nursing, Department W, 1900 West Polk St., Chicago 12, Ill.

DIVISIONAL ADMINISTRATOR: Out-patient, admitting, and X-ray nursing services, including service and education. Salary upon request. Apply Director, Cook County School of Nursing, Department W, 1900 West Polk St., Chicago 12, Illinois.

INSTRUCTOR, FUNDAMENTALS OF NURSING (nursing arts): Salary range $420-$455 per month, 37½-hour week. Single room, nurses' residence, $20 and $25 per month. Apply Director, Cook County School of Nursing, Dept. W, 1900 West Polk St., Chicago 12, Ill.

REGISTERED NURSES: 170-bed general hospital. Openings in operating room, delivery room, and staff positions. Starting base salary $300 per month. Ideal climate, convenient recreational facilities year round. Apply Director of Nurses, Yakima Valley Memorial Hospital, Yakima, Wash.

STAFF NURSES: "Come to the Nation's Capital." Beginning salaries $3,670, $4,080, $4,525, depending upon experience. Good personnel practices. Apply—Director of Nursing, D. C. General Hospital, Washington 3, D. C.

WORK OVERSEAS: Nurses and technicians are needed by American companies with overseas projects. Booklet tells how and where. Price $1. Satisfaction guaranteed. Free booklet on retirement in economical Mexico with each order. Publisher Rathe, Box 2013, Pasadena, Calif.

How Does the I.C.A. Promote World Health?

(*continued from page* 19)

very well in many of the countries, especially in the Near East and Far East. It is necessary in those countries to learn only certain phrases as a matter of courtesy. In some countries French is very useful.

In Latin America the situation is slightly different. Spanish is spoken in the majority of the countries, Portuguese in Brazil, French and Creole in Haiti, and in Surinam there is the very interesting Taki-Taki. For assignments in Latin America, it is almost imperative that the employee know the language of the country at the time of assignment, or be willing to learn it after employment.

Q. How many nurses, in addition to sanitarians, and other personnel, are employed by the I.C.A., and what are their general duties?

A. There are at present 91 nursing positions in the I.C.A., some of them because of replacement needs and new programs. Most positions are on the consultant level. Although nurses do give direct service at times, the underlying philosophy is to render consultation service and to assist in the training of others to do the job and to carry on alone after the basic program is effectively operating.

Our nurses guide, consult with, work with, and assist wherever necessary and feasible. It is because relatively few nurses are needed for these programs—really very few when one considers the total number in the United States—that the I.C.A. has established the present employment requirements. We believe she must have adaptability, social grace, and be the kind of person who can and will represent the best in nursing.

Q. Does a nurse have a choice of countries to work in?

A. Wherever possible, a choice of assignment is permitted, and nurses are given an opportunity to select their areas. However, since the I.C.A. programs are undertaken in the newly developing countries, assignments are naturally in these areas. Western Europe and North America are not included.

Q. Where can a nurse apply for employment with the I.C.A.?

A. The Field Staffing Branch, Public Health Division, is always pleased to receive inquiries for information about employment. This inquiry may be made in the form of a letter. However, if the nurse believes she might qualify and she wishes to avoid delay through correspondence, the application for Federal employment, Standard Form 57, may be sent as an initial contact. The Standard Form 57 can be obtained at U.S. Employment Service Offices, and Regional Offices of the U.S. Civil Service Commission. The address is Field Staffing Branch, Public Health Division, International Cooperation Administration, 806 Connecticut Avenue, N.W., Washington 25, D.C.

SAUNDERS BOOKS

Stafford & Diller–Surgery and Surgical Nursing

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Here is a vivid picture of up-to-date surgery and patient-centered nursing care. The authors illuminate general principles of surgery plus nurse-patient relationships, nursing responsibilities, patient teaching and rehabilitation. Each of the various types of surgery is considered with continuous stress on the *art of nursing*. You will value the new chapters covering: Preparing the Patient for Operation; Nursing in Pediatric Surgery; and Nursing the Geriatric Surgical Patient. Many new discussions give you pertinent data on such topics as: recovery room; cardiac arrest; hemorrhage; shock; thoracic and eye surgery; carcinoma; nutrition; etc.

By EDWARD S. STAFFORD, B.A., M.D., F.A.C.S., Associate Professor of Surgery, The Johns Hopkins University; Surgeon, The Johns Hopkins Hospital; Lecturer in General Surgery, The Johns Hopkins Hospital School of Nursing; Chief of the Surgical Service, Union Memorial Hospital; and DORIS DILLER, B.A., M.A., R.N., Associate Professor of Nursing, Skidmore College. 469 pages, with 174 illustrations. $5.00. *New (3rd) Edition!*

Johnston–Personnel Program Guide

A New Book

For Nursing Education and Nursing Service Agencies. Trained personnel directors in hospitals and nursing schools are few and far between. The average director of nurses is called upon to assume this function, often with no previous training. This valuable *new* book gives her sound principles and accepted techniques which she can put into immediate use. The author considers all the various personnel services such as those used in recruiting, selecting and assigning workers. She clearly points out current problems which are likely to arise and how to cope with them. You'll find the style fluent and the text free of statistics. Typical coverage includes: nature of personnel work; selection of nurse students; factors in residence living; research in nursing; legal services; uses of evaluation; techniques of counseling; "brainstorming"; sick leave; etc.

By RUTH V. JOHNSTON, Ph.D., Associate Professor, School of Nursing, University of Minnesota, Minneapolis. 137 pages. $2.75. *New—Just Ready!*

Hansen–Study Guide and Review of Practical Nursing

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